

DEP 703 | Communication Design Project II

Development of Educational Aid for Game Design

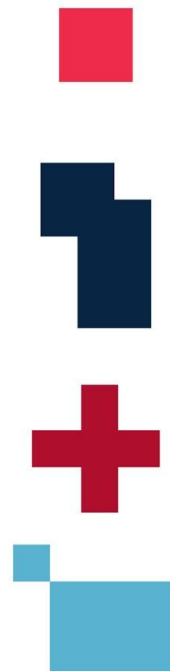
Ishu kardam

176450002

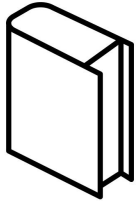
Communication Design 2017-19

Project Guide : Prof. Prasad bokil

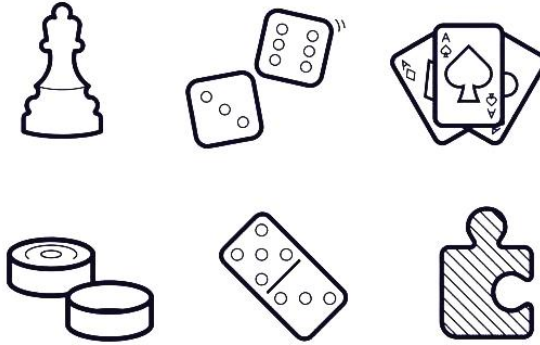
IDC School of Design, IIT Bombay



Attempts to Design platform



Book



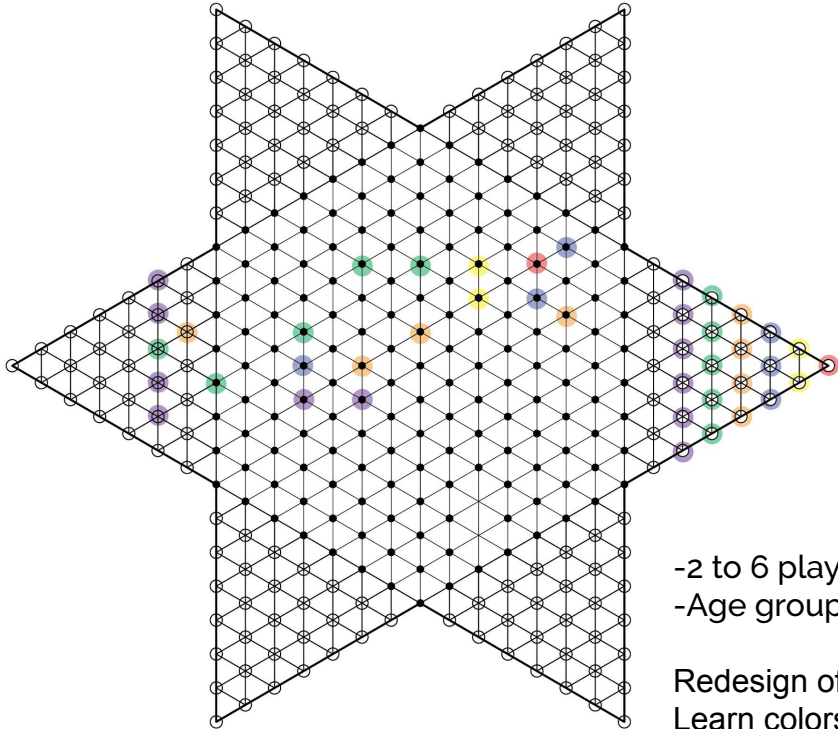
Board game



**Interactive
E-Book**

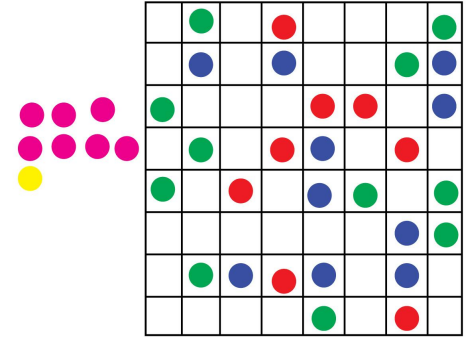
Understanding Game design

Attempt in game design



-2 to 6 players
-Age group 8-12 years

Redesign of checkers to
Learn colors of VIBGYOR



-2 players
-Age group 8-12 years

Redesign of checkers to
Learn additive and subtractive
colors

Attempts in Game Design

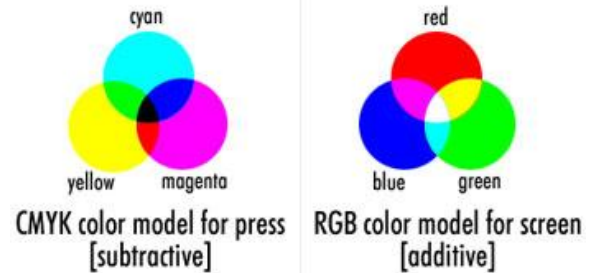
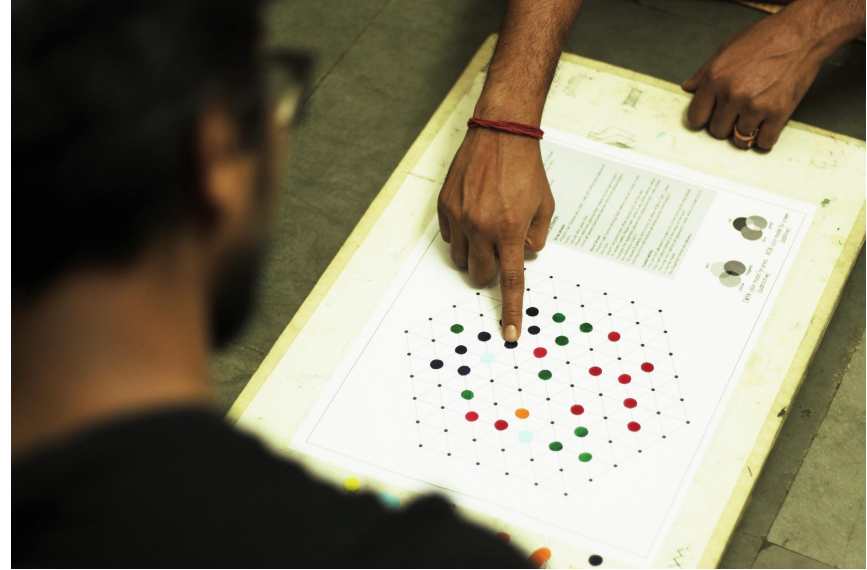
HOW TO PLAY

What you need:

- 10 Pieces of each color Red, Yellow, Blue (30 pieces total)
- A Hexagonal grid.
- 2-3 players
- Age group 8-12 years

Objective:

- To capture your opponent's tokens so that he can no longer Make three in a row. (In other words, until he has only 2 pieces left.)
- Create white or black color by combining 3 different pieces.
- Score maximum points.



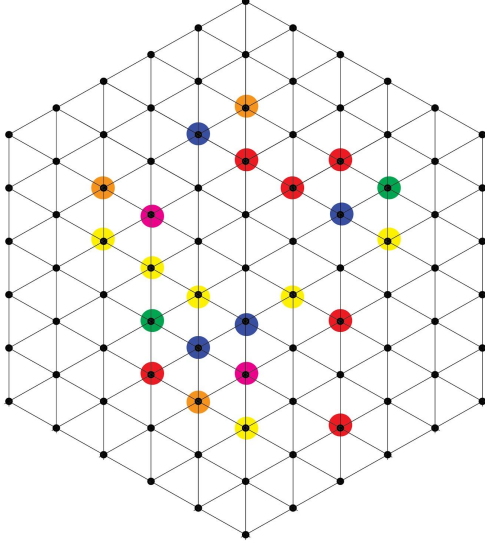
Instructions

Drop phase:

- Players can choose any color, color left will be also placed on board.
- Decide who goes first.
- Players alternate placing their tokens on the game board.
- Once all tokens have been placed, the move phase begins.

Move phase:

- Players take turns moving their tokens, one at a time, in any direction.
- player can jump over other pieces, but not his own.
- To score 1 point, Player have jump to any other pieces, which changes the opponent's pieces into respective sec. color.(check the reference chart)
- To score 5 points, form a trio, of either RGB or CMY. (after forming a trio will remove all three pieces from board.)



HOW TO PLAY

What you need:

- 10 Pieces of each color Red, Yellow, Blue (30 pieces total)
- A Hexagonal grid
- 2 players eager to become champions.

Objective:

- To capture your opponents tokens so that he can no longer Make three in a row. (In other words, until he has only 2 tokens left.)
- Create white or black color from pieces.
- Score maximum points.

Instructions:

Drop phase:

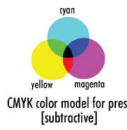
- Players can choose any color, color left will be also placed on board.
- Decide who goes first.
- Players alternate placing their tokens on the game board.
- Once all tokens have been placed, the move phase begins.

Move phase:

- Players take turns moving their tokens, one at a time, in any direction.
- player can jump over other pieces, but not his own.
- To score 1 point, Player have jump to any other pieces, which changes the opponent's pieces into respective sec. color (check the reference chart)
- To score 5 points, form a trio, of either RGB or CMY. (after forming a trio will remove all three pieces from board.)

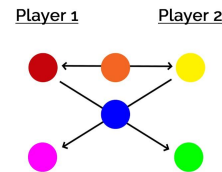
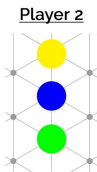
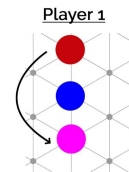
Constraints:

- You are not allowed to make 3 in a row during the drop phase.
- You cant place tokens to the edge of the grid.
- You may not capture an opponents token when it is part of a 3 in row he made.
- No diagonal moves are allowed.

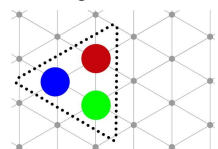


CMYK color model for press [subtractive]

RGB color model for screen [additive]



Creating white color



Working with hands

*"We don't know where we get our ideas from.
What we do know is that we do not get
them from our laptops."*

—John Cleese

*"I have stared long enough at the glowing flat
rectangles of computer screens.
Let us give more time for doing things in the real
world . . . plant a plant, walk the dogs, read
a real book, go to the opera."*

—Edward Tufte

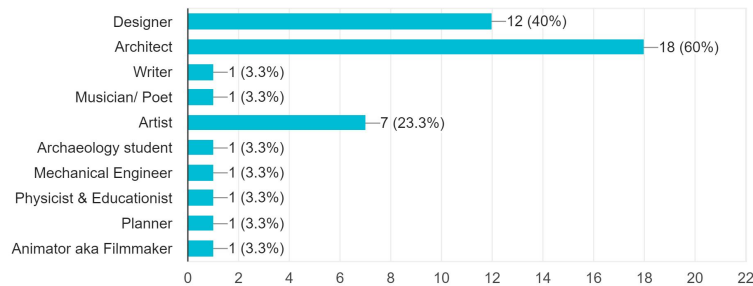


Questionnaire

Physical book vs. E-Book

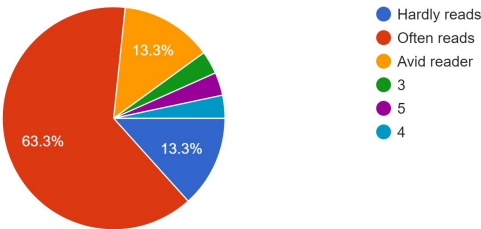
Your creative field

30 responses



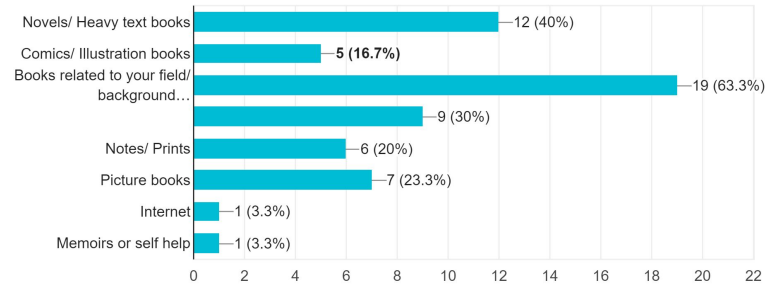
How often you read ?

30 responses



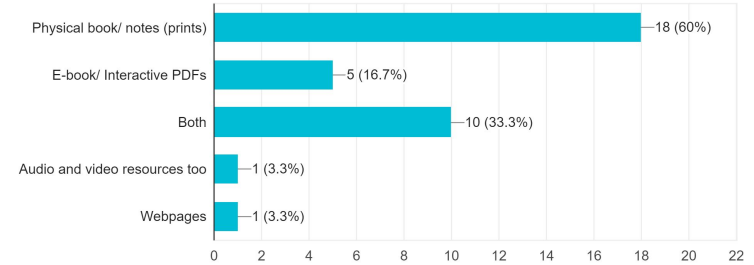
what you usually read ?

30 responses



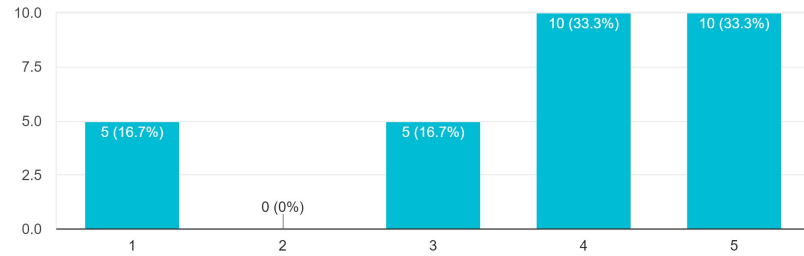
What medium you usually prefers ?

30 responses



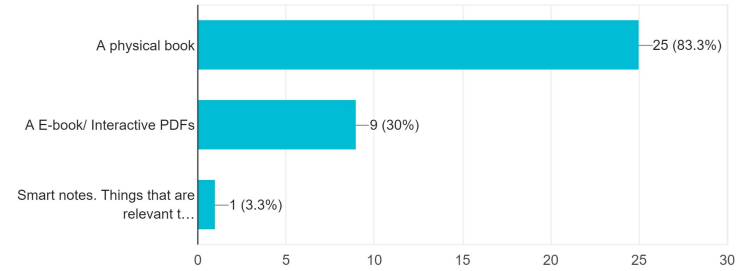
How much experience sense of 'smell and touch' matters to you, in books ?

30 responses



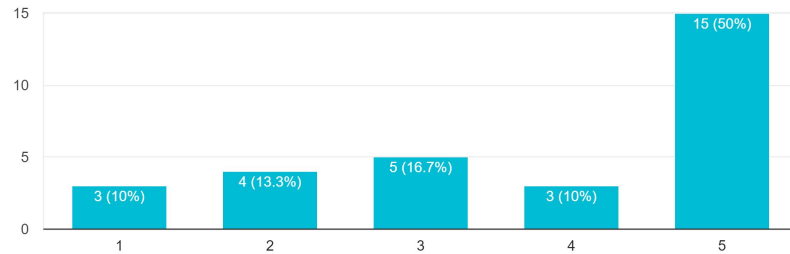
What will you prefer for your studies related to your course ?

30 responses



Do you like to add any element (bookmarks/ highlighting/papers/ scribbling / leaves) that helps you to interact better with your books

30 responses



Booklet design

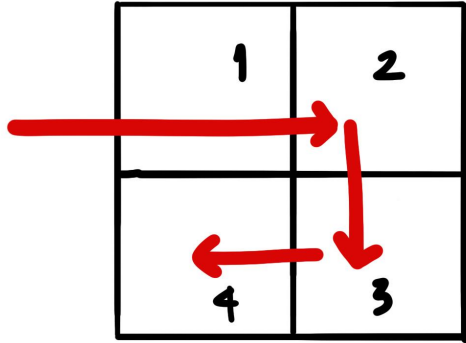
- User Engagement
- Sensory experience can't be replaced.
- Sensory adventure of smell/ touch/ sound.
- Less distractions

What constitutes game ?

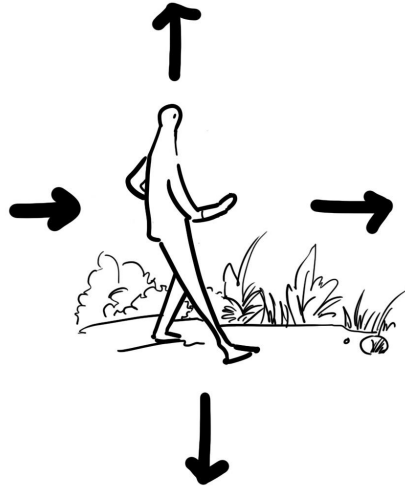
- Fun
- Interests
- Emerging conditions
- Challenges
- Instant feedbacks
- Uncertainty

Booklet design

Mental modelling in game world.

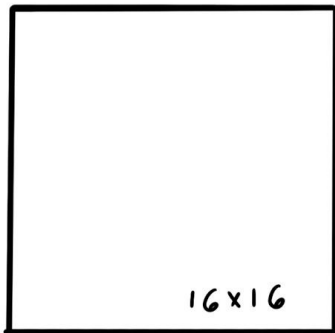


Four coordinates for
character movement

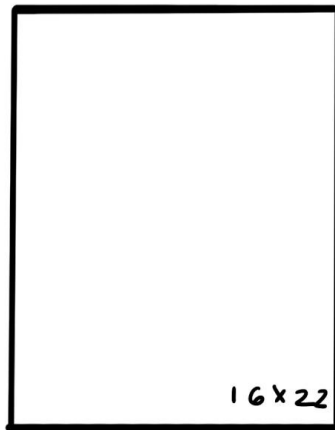


Arbitrary movements and choices helps
to create pattern to create mental model

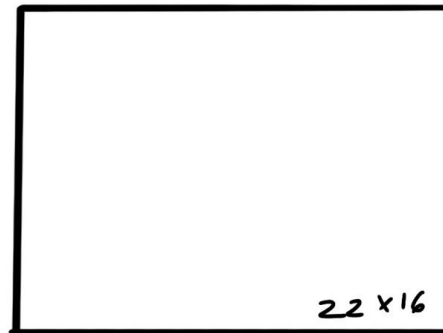
Layout



Square



Portrait



Landscape

Course structure



```
graph LR; A[Course structure] --- B[ ]; B --- C[ ]; B --- D[ ]; B --- E[ ]
```

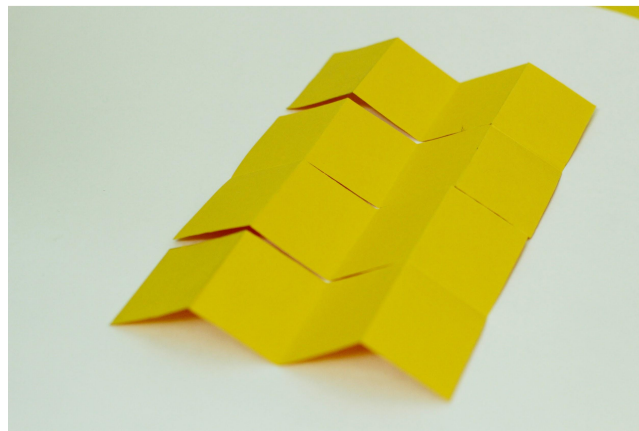
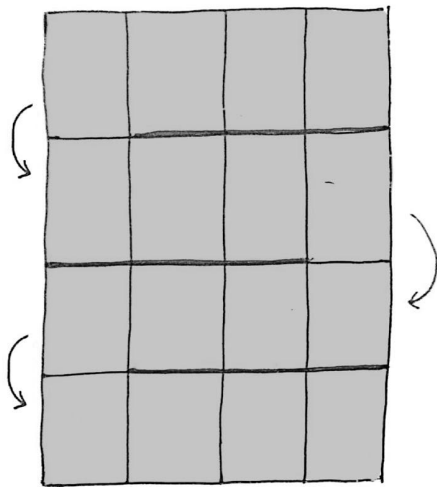
Course
Introduction

Chapters &
Assignments

Games &
case studies

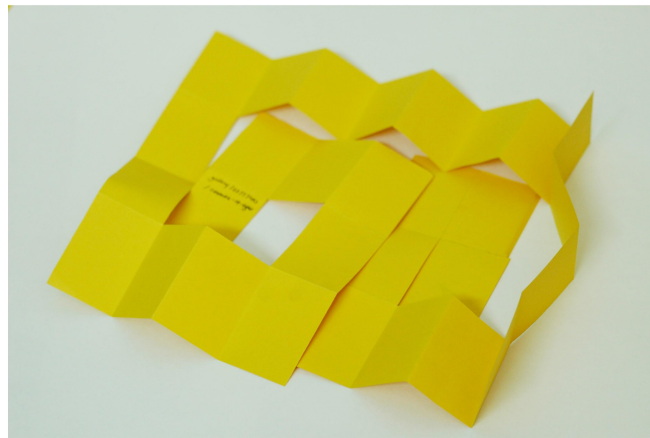
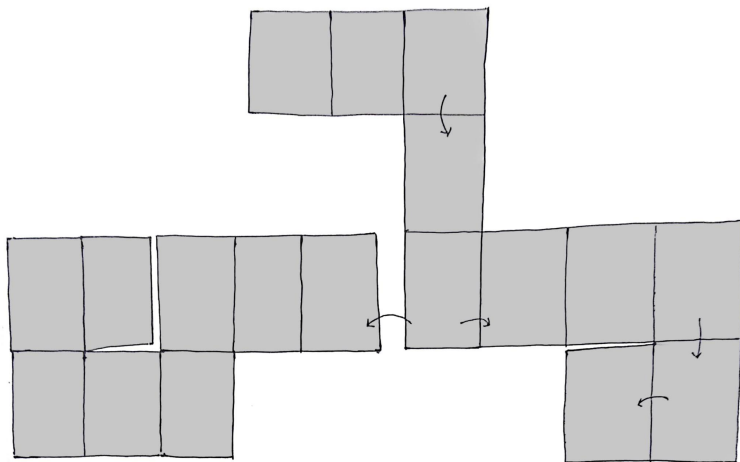
Layout

Booklet 1



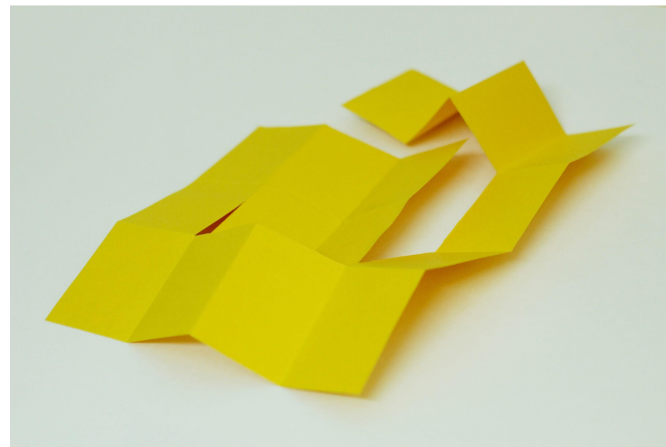
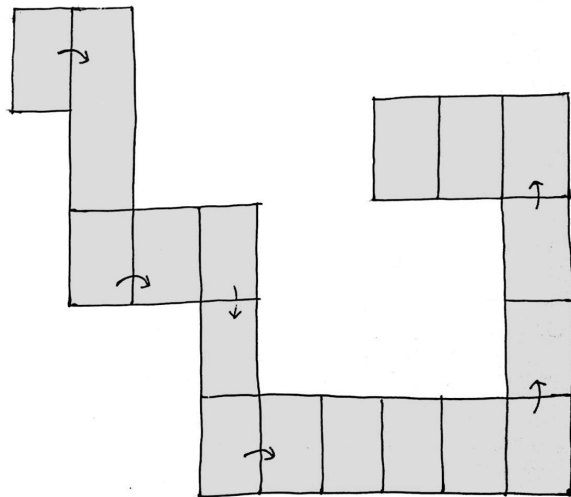
Layout

Booklet 2



Layout

Booklet 3



Typography

Heading

Aa Akzidenz Grotesk BQ
Bold

Paragraph

Aa Akzidenz Grotesk BQ
Regular

Typography

Heading

Learning from game design

48 pts

Heading

Learning from game design

24 pts

Body text

the interactions between players that occurs during the play mode are two kinds interaction that are part of planned game play interaction that happens in spite of game play. generally these are informal exchanges and involves fun, shouting, laughter and so on.

12 pts

List style

the play mode are two kinds
1. Interaction that are part of planned
2. Interaction that happens in spite of game play.
3. Interaction that done by player by intention.

12 pts

Call outs

How game really works ?

10 pts

Color palette

Primary colors



#072542 #0B3655 #1EA5B7 #D9EBF3



#F38298 #EE314B #C72038 #AF1F25

Alternative



Visual Elements

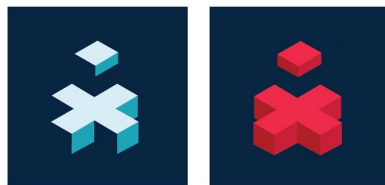
2 Dimensional



Navigation

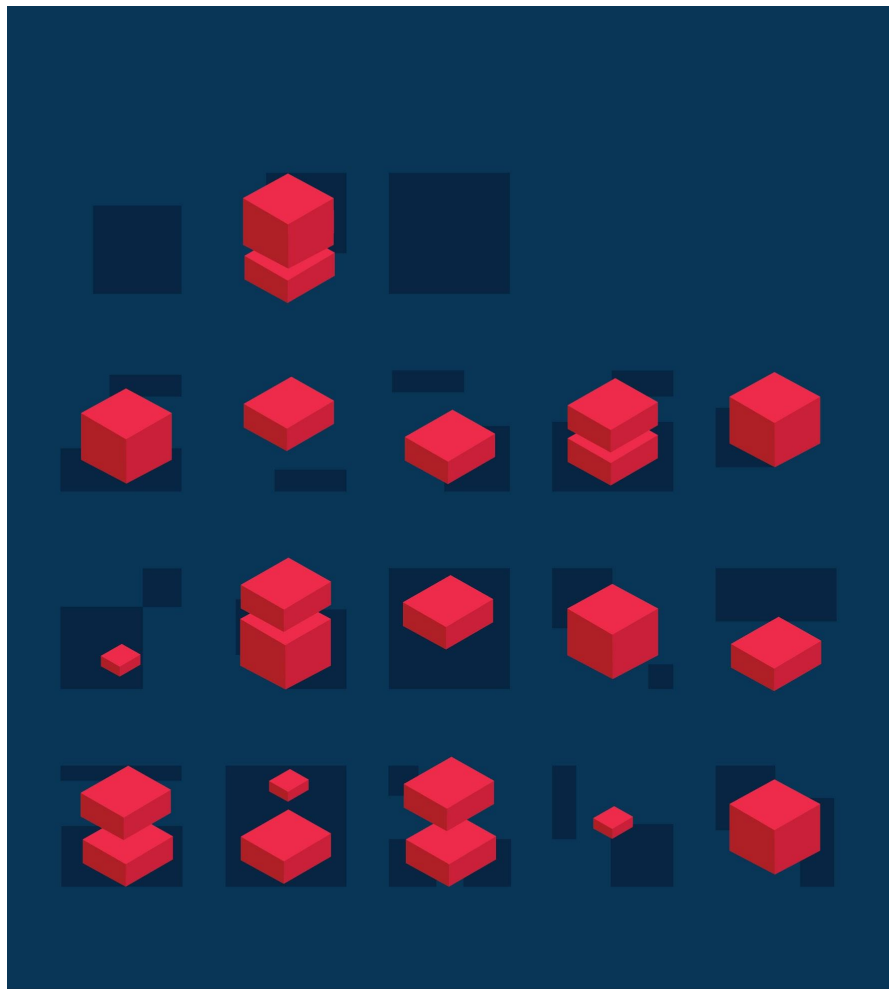


3 Dimensional



Environment





It is a separate category within the camera. Additional
properties in this category can be imported on an on/off basis.

1. Broader goals of game design

1.1 Broader Goals

Fun and entertainment

These are common objectives. However, the games can also serve to instill a huge feeling of awe.

- 3) leaving the table without saying goodbye
- 4) requesting the waiter to bring a glass of cold water
- 5) not using a silver spoon or fork
- 6) taking a knife and fork and using them to hold a fork
- 7) taking a glass and using it to hold a glass
- 8) taking a glass and using it to hold a glass
- 9) taking a glass and using it to hold a glass
- 10) taking a glass and using it to hold a glass

1.2 Broader goals of game design elective

Purposful games

It is a separate category within the current Academic perspective in such a way as to impart recognition of "It may be a social cause, religious, preaching, or concepts in science, geographic, maths and so on. These generally fall under so categories which disbandment

1.2 Every game has its own in-built objective

Those a maddness, by the go maddly like dadd maffin
 reaching first (a waken and ladder), Chuck was the king,
 (Choss), becoming rich (a maddly) I finish your pieces
 on the board (a maddly), Conquer your enemies (a maddly)
 or resources (a maddly) (a maddly) and so on

2. Understanding the working of games

2.1 What makes the game work?

© 1997 by John Wiley & Sons, Inc.

2.2 What motivates children to play?

2.3 How can you control this motivation

Let us experience these issues through our assignments.

Assignment

[illegible]

4. What makes game a game?

Essential conditions for qualifying an activity as a game are:

- [illegible]

What does playing a 'game' mean?

Every game requires players to:

1. Every game is a sequence of play and pay.
2. Pay is a realization of interest action.
3. Pay is a value for the interest action.
4. Pay is a value for the interest action.
5. Pay is a value for the interest action.
6. Pay is a value for the interest action.

In many cases, the time available to go through these steps is a fraction of a second. Bowling balls are running between the wheels in or out of contact with the track.

Children games in these books are at different degrees and in different directions in the series.

When a physicist says that matter exists, "there" means the universe and that includes the supercoldest and emptiest of all environments: the background of the universe. Like the stars at the center of galaxies, the cosmic voids are dark and lonely.

6. Terminology used in game design

5. Gameplay

[illegible]

A.1 Genre: world/universe.

But the *dependencies* themselves would appear to make even the notion of "dependencies" meaningless. In other words, the dependencies themselves would be self-referential and self-referentiality is a paradox. So, they mean nothing. In other words, they are meaningless.

[In chess the pawn can only **move diagonally**. The knight goes two and a half squares! Bishops are more mobile and powerful than the knight!]

Human Integral, Inc.

has been made a point of view.

There is no limit to the number of times you can use any of the games. This is another advantage you should carefully consider to make your purchase possible. This is one of the many reasons why we like it.

In case of Iron II it is the board BSW pieces + Red queen.
 Strikers: Jax, Kic, Book, Powder and ... etc. Every game has
 specific infrastructure. Lira has chess and snakes
 and ladders.

If you generalize the list across different games, it includes items with greenies, player's pieces, dice, random society descriptions, tables in table terms and a board and so on. In digital games, it includes game elements, social interactions, language, characters and so on, and the so forth and so on. Here is the set of items that games generally contain but for the sake of making a small game, we can limit it to:

First, given our highly conservative assessment of effects within European countries, it is not likely that an urban surface, like a highway or a city centre town, justifies a strict classification. In Ashbury, GPR has a course, course a wide road is stayed on the ditch that is spatially prepared with construction that it will be able to turn the same team capabilities. The unpredicted behaviour of the natural component adds more uncertainty to these natural components are associated in which no

subjects used in this study were given a questionnaire approximately 1 year after the accident and emergency admission. Typically when subjects are interviewed, they are asked to return some written feedback on the study. This is not always necessary, but in this case, the researchers did not want to miss any feedback from the subjects. Therefore, after one year of the accident.

Declining Interchange

Thinking of new infrastructure and facilities is one of the useful starting points for creative constraint-oriented delivery. The creator comes with a design technology (concrete and steel) or a mission (affordable housing) and negotiates with the other side to achieve a better endline.

When a change in one intelligence is associated with a change in all the other intelligences, it is called a *global change*. If the test scores consistently increase or decrease, it reflects a global change. Increases are attributed to the construct. When, instead, the implications of these changes are less obvious.

Digital games: Advantages
Manufacturing and delivery

New versions can be easily introduced. Language can be changed easily.
Easy to customize, update.
Easy to replicate (produce in numbers) and distribute
Less physical resources are required and so ecofriendly.

Player's conveniences

Inherently attractive, as they display tech capabilities of the player.
Children are proud to show their capabilities with the digital media.
Easy to carry, truly portable and no separate storage space is required. In many cases, no dedicated hardware is required.
Scoring can be automatic. Complex scoring is possible beyond what players could have used. Right and wrong is easy to determine. So, no quarrels between players.
Game demo can be incorporated as learning support. Easy to learn.
Single player can play as while travelling, in hospital stay.

Potential in new gameplay

Contextual knowledge delivery can be built into the system.
Use of difficulty levels allow people in different age to participate. The life of the game is thus extended.
Time given to player (exposure or move reaction time can be controlled) be stressed. Panning allows things to be partially available. So, memory can jogged.
Possible to hide player's identity by using avatar or choosing a character.
The system can generate special situations that affect a specific player or all players during the game to maintain uncertainty.
Sound can be used as a part of game play or as additional input or for excitement.

AI potentials

The system can recognize the player, track his progress/development of intellect or skill, give suggestions and develop his profile over difficulty levels as well as across different games.
The analytics can give useful cues to the kind of people who liked the game and might also reveal why? Such inputs are of great help to design future games.
Artificial intelligence can be built in to challenge the player.

Hybrid games 1

Hybrids are class of games that try to combine the advantages of board games and digital games. There are in fact very few games that qualify to be called as hybrid digital games.
It is better to treat hybrid games as a continuum than a category, based on the level of hybrid-ness.

It is important to learn how to exploit the middle part of the continuum and predictably move on the line.

Hybrid games 2

To qualify it to be called as hybrid, it must
Ensure that the players are co-located in the same space while playing the game
The games combine physical and digital environments seamlessly as part of the game play and take turn as defined by the game play
They are not copies of conventional games put on the tablet and use computing power.

Other desirable features are

The players are encourages to interact with each other as a part of the game play. The interaction should be fun, but also teach how to work together as teams, how to follow rules and sometimes make rules and so on.

Use this interaction gainfully to

Learn from each other as a part of the game play,
To learn from somebody who knows the game,
in post game discussions,
Through the prompts that could come from the

What is a good game?
Good game dynamics works amongst equal

Good games are age specific

Age appropriateness. Games, particularly during child's growth phase are age specific. Most children do not want to play games that they have master/played few years back.

However, when the game is based on intellect or skill and player can acquire (conquer) expertise, then it can be played across age groups, but at different level of play. In such cases, matching of the opponent's capabilities and standard is critical.

Good game play gives player control over his fate

Good game is where the players have control over his fate and opportunity to control your opponent's fate. This is ensured by giving each player more choices / options for every turn/move.

All players must have reasonably equal opportunities to win.

Ideally, the uncertainty about the outcome should last till the end game.

Good games maintain/stretch uncertainty of the outcome till the end.

That is how tension should be created in the game.
Goals are to
Maintain uncertainty throughout
Fate of the player should keep fluctuating throughout.

Good game allows players to master the game

The player gets recognized as expert and the process can be through several formal stages (like in chess player A and grand master norms, belts in Karate) Alternately, it can be public recognition (He is a champ)

Mastering may involve learning skill, or polishing memory.

Good games are playful and fun

Games are playful. Interestingly, the idea of playfulness and fun are dependent on the game, context of playing and age group. Party games are a different kind of fun [entertainment], than say chess (tension)
Spectators also look for different kind of funs in different games.

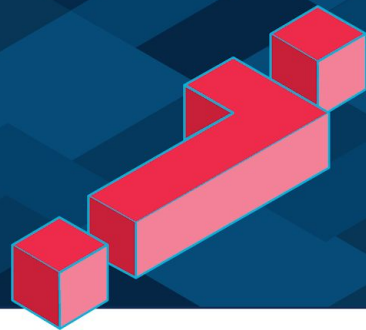
Good games are engaging

Once the player enters the game world, a good game grips him so much that he refuses to come out. Such intense involvement is possible when the challenges the game states offer are difficult, but appear plausible.

Matching player expertise

Player is a key component of the game world, particularly in game dynamics. Even in field games like tennis, football, all players go through the same process, face similar situations. However, the opportunities perceived differ, based on the player's expertise and skill.
Expert player can see opportunities because of their capabilities. (With his ability to retrieve a ball and return the shot, an expert can see more action options. However, a beginner may not consider them as an option at all)

So, matching their abilities is important for the game to sustain. [In boxing, it is based on the weight like flyweight, featherweight, bantamweight, lightweight, heavy weight etc. In some games the players are classified as level A, B or C. Chess has norms that define levels. In informal play, when player abilities do not match, juniors are given a handicap)
One can never figure out who will play the game, nor is the expertise controllable.



Zoo and game
Board game of game design
Futuristic games
Motivating children to play
Knowing game world
Game introduction
Game mechanics
Chess
Gameplay
Board Games
Digital Games
Hybrid Games

Learning with Game Design

Prof. Uday Athavankar
Prof. Prasad Bokil

Classifying games

There are several ways in which the games are classified.
For the purpose of this discussion, the games can be classified
as physical or digital.

Physical games

Most of the conventional games fall into the first category.

They include indoor versions like

Board games like Monopoly, Chess;

Playing card games

Games that demand special form of hardware like carom
and so on.

They also include outdoor versions cricket, football, tennis
and so on. They tend to have higher level of physical actions,
skills and demand fitness.



Digital games

Digital games are often screen based on computing power.

Often a player plays against a machine or sometimes
against other players who are connected online, but are
not necessarily co-located in the same space. They demand
hardware like desktops, tablets and of late mobile phones.
Some of them use specially design hardware to control
the game moves.



Hybrid games

Hybrids are class of games that try to combine most of the
key advantages of both types of games; the board games and
digital games. This is not a known category, but is expected to
develop into a popular category in future.

Digital games: Advantages

Manufacturing and delivery

New versions can be easily introduced. Language can be changed easily.

Easy to customize, update.

Easy to replicate (produce in numbers) and distribute

Less physical resources are required and so ecofriendly.

Player’s conveniences

Inherently attractive, as they display tech capabilities of the player.

Children are proud to show their capabilities with the digital media.

Easy to carry, truly portable and no separate storage space is

required. In many cases, no dedicated hardware is required.

Scoring can be automatic. Complex scoring is possible beyond what

players could have used. Right and wrong is easy to determine. So, no

quarrels between players.

Game demo can be incorporated as learning support. Easy to learn.

Single player can play as while travelling, in hospital stay.

Potential in new gameplay

Contextual knowledge delivery can be built into the system.

Use of difficulty levels allow people in different age to participate. The life

of the game is thus extended.

Time given to player (exposure or move reaction time can be controlled)

be stressed. Panning allows things to be partially available. So, memory

can jogged.

Possible to hide player’s identity by using avatar or choosing a character.

The system can generate special situations that affect a specific player or

all players during the game to maintain uncertainty.

Sound can be used as a part of game play or as additional input or for

excitement.

AI potentials

The system can recognize the player, track his progress/development

of intellect or skill, give suggestions and develop his profile over

difficulty levels as well as across different games.

The analytics can give useful clues to the kind of people who liked

the game and might also reveal why? Such inputs are of great help to

design future games.

Artificial intelligence can be built in to challenge the player.

Hybrid games 1

Hybrids are class of games that try to combine the

advantages of board games and digital games. There are

in fact very few games that qualify to be called as hybrid

digital games.

It is better to treat hybrid games as a continuum than a

category, based on the level of hybrid-ness.

It is important to learn how to exploit the middle part of the

continuum and predictably move on the line.

Hybrid games 2

To qualify it to be called as hybrid, it must

Ensure that the players are co-located in the same space

while playing the game

The games combine physical and digital environments

seamlessly as part of the game play and take turn as

defined by the game play

They are not copies of conventional games put on the

tablet and use computing power.

Other desirable features are

The players are encourages to interact with each other

as a part of the game play. The interaction should be

fun, but also teach how to work together as teams, how

to follow rules and sometimes make rules and so on.

Use this interaction gainfully to

Learn from each other as a part of the game play.

To learn from somebody who knows the game,

in post game discussions,

Through the prompts that could come from the

What is a good game?

Good game dynamics works amongst equal

Good games are age specific

Age appropriateness. Games, particularly during child’s growth

phase are age specific. Most children do not want to play games

that they have master/played few years back.

However, when the game is based on intellect or skill and player

can acquire (conquer) expertise, then it can be played across age

groups, but at different level of play. In such cases, matching of

the opponent’s capabilities and standard is critical.

Good game play gives player control over his fate

Good game is where the players have control over his fate and

opportunity to control your opponent’s fate. This is ensured by

giving each player more choices / options for every turn/move.

All players must have reasonably equal opportunities to win.

Ideally, the uncertainty about the outcome should last till the end

game.

Good games maintain/stretch uncertainty of the outcome till the end.

That is how tension should be created in the game.

Goals are to

Maintain uncertainty throughout

Fate of the player should keep fluctuating throughout.

Good game allows players to master the game

The player gets recognized as expert and the process can be

through several formal stages (like in chess player A and grand

master norms, belts in Karate) Alternately, it can be public

recognition (He is a champ)

Mastering may involve learning skill, or polishing memory.

Good games are playful and fun

Games are playful. Interestingly, the idea of playfulness

and fun are dependent on the game, context of playing

and age group. Party games are a different kind of fun

[entertainment], than say chess (tension)

Spectators also look for different kind of funs in

different games.

Good games are engaging

Once the player enters the game world, a good game

grips him so much that he refuses to come out. Such

intense involvement is possible when the challenges

the game states offer are difficult, but appear plausible.

Matching player expertise

Player is a key component of the game world,

particularly in game dynamics. Even in field games

like tennis, football, all players go through the

same process, face similar situations. However, the

opportunities perceived differ, based on the player’s

expertise and skill.

Expert player can see opportunities because of their

capabilities. (With his ability to retrieve a ball and

return the shot, an expert can see more action options.

However, a beginner may not consider them as an

option at all)

So, matching their abilities is important for the game

to sustain. [In boxing, it is based on the weight like

flyweight, featherweight, bantamweight, lightweight,

heavy weight etc. In some games the players are

classified as level A, B or C. Chess has norms that define

levels. In informal play, when player abilities do not

match, juniors are given a handicap]

One can never figure out who will play the game, nor is

the expertise controllable.

Designing infrastructure Thinking of new infrastructure and artifacts is one of the useful starting points for creative explorations, particularly if the creator comes with a design or technology background. Speculate on new modified artifacts and elements with their own attributes and properties. When designing a new digital game, it is possible to take advantage of the technology possibilities to create new artifacts and/or assign properties and attributes to the artifacts. Then, explore the implications of these changes on the game play. The thinking that is important is to speculate with out-of-the-box ideas and ask 'what if I deploy this kind of artifact? How will it change the gameplay?' Willing players Players interact with the artifacts, use the rules (or abuse) and gainfully engage themselves. Many spend their quality time practicing and participating with the game artifacts. None of this is possible, unless playing a game is a source of joy to them. They are the key to the success of the game. Two, four, and sometimes many willing players play against each other, or against a machine. This raises interesting challenges to game designers. <i>"Is the new game able to give them the feeling of 'time well spent feeling' at the end? How do we ensure that they enjoy the game? Why should they come back to play again?"</i> Lastly, how should designer take advantage of the fact that the players willfully enter the game world, however strangely the world may work. Players never question the quixotic nature of behaviour of its element nor challenge the rules. <i>"Is not this an opportunity to ask him to do things that he would not have done in the real world?"</i>	 What is a good game? Optional points Good games allow purposeful interaction between players There are two kinds of interactions. Purposeful interactions, that are part of game mechanics. These interactions are part of the planned game mechanics and take the game forward. You may have to borrow something from the opponent, give him something, send a coded message to others and so on Social interaction between players. This is one reason children and even grown ups come to play games like Cards (bridge), Carom. Primary purpose of the traditional games was to bring players together in a game world. This has been a critical point against digital games. They have a tendency to isolate players by locking him into a digital game world playing with often an Imagery enemy. Playing games together in same space allows social interaction. Hybrid games can potentially bring this ambience back to digital games. This also offers a good learning opportunity for children. Besides, they also learn to be part of the team and understand social interaction. Good games allow competitions to be held Competitions are difficult (if not impossible) to organize when the game is completely based on luck. Competitions in snakes and ladders do not make sense. Such competitions tend to be organized with money at stake. (like Fluth in card games) Unless the game is spectator oriented, competitions are difficult to sustain. With the enclosure in specially made glass cage, squash became popular. While Kabbadi became popular with higher stakes. Typically, the games have to be fast paced and of shorter duration to become spectator worthy. The games can be long if they are typical vacation games which do not have spectators.
Designing infrastructure Thinking of new infrastructure and artifacts is one of the useful starting points for creative explorations, particularly if the creator comes with a design or technology background. Speculate on new modified artifacts and elements with their own attributes and properties. When designing a new digital game, it is possible to take advantage of the technology possibilities to create new artifacts and/or assign properties and attributes to the artifacts. Then, explore the implications of these changes on the game play. The thinking that is important is to speculate with out-of-the-box ideas and ask 'what if I deploy this kind of artifact? How will it change the gameplay?' Willing players Players interact with the artifacts, use the rules (or abuse) and gainfully engage themselves. Many spend their quality time practicing and participating with the game artifacts. None of this is possible, unless playing a game is a source of joy to them. They are the key to the success of the game. Two, four, and sometimes many willing players play against each other, or against a machine. This raises interesting challenges to game designers. <i>"Is the new game able to give them the feeling of 'time well spent feeling' at the end? How do we ensure that they enjoy the game? Why should they come back to play again?"</i> Lastly, how should designer take advantage of the fact that the players willfully enter the game world, however strangely the world may work. Players never question the quixotic nature of behaviour of its element nor challenge the rules. <i>"Is not this an opportunity to ask him to do things that he would not have done in the real world?"</i>	Good games should also be easier to learn Look at Zenga. You learn the rules in seconds! Though it is not always possible to design games that are easier to learn, it is a desirable feature greater learning time can be discouraging in specific contexts. Learning demands motivation before they have experienced the game. If you generalize the list across different games, it includes, Board with graphics, player's pieces, dice, racket, specially designed table as in table tennis and billiard and so on. In digital games it includes gaming consoles, special hardware if tangible interfaces are used and the software that backs the actions. Some games also rely on standard hardware like tablets, mobile phones and monitors. Field games are highly dependent on the quality of infrastructure. Some games use natural or partially curated natural surfaces. Tennis is played on clay courts, lawn (besides on artificial surface like AstroTurf). Golf has curated course and cricket is played on the pitch that is specially prepared with expectations that it will behave to suit the home team capabilities. The unpredictable behaviour of the natural component adds more uncertainty, as these natural components are susceptible to weather. Artifacts used in these field games are continuously upgraded by incorporating new technologies and materials. Typically when the stakes are high, the games are more susceptible to technology interventions. This has positively influenced the players' performance as well as assist referees judgments. Tennis, cricket are some of the examples.

Designing infrastructure

Thinking of new infrastructure and artifacts is one of the useful starting points for creative explorations, particularly if the creator comes with a design or technology background. Speculate on new modified artifacts and elements with their own attributes and properties.

When designing a new digital game, it is possible to take advantage of the technology possibilities to create new artifacts and/or assign properties and attributes to the artifacts. Then, explore the implications of these changes on the game play.

The thinking that is important is to speculate with out-of-the-box ideas and ask 'what if I deploy this kind of artifact? How will it change the gameplay?'

Willing players

Players interact with the artifacts, use the rules (or abuse) and gainfully engage themselves. Many spend their quality time practicing and participating with the game artifacts. None of this is possible, unless playing a game is a source of joy to them. They are the key to the success of the game. Two, four, and sometimes many willing players play against each other, or against a machine. This raises interesting challenges to game designers.

'Is the new game able to give them the feeling of 'time well spent feeling at the end? How do we ensure that they enjoy the game? Why should they come back to play again?'

Lastly, how should designer take advantage of the fact that the players willfully enter the game world, however strangely the world may work. Players never question the quixotic nature of behaviour of its element nor challenge the rules.

'Is not this an opportunity to ask him to do things that he would not have done in the real world?'

Designing infrastructure

Thinking of new infrastructure and artifacts is one of the useful starting points for creative explorations, particularly if the creator comes with a design or technology background. Speculate on new modified artifacts and elements with their own attributes and properties.

When designing a new digital game, it is possible to take advantage of the technology possibilities to create new artifacts and/or assign properties and attributes to the artifacts. Then, explore the implications of these changes on the game play.

The thinking that is important is to speculate with out-of-the-box ideas and ask 'what if I deploy this kind of artifact? How will it change the gameplay?'

Willing players

Players interact with the artifacts, use the rules (or abuse) and gainfully engage themselves. Many spend their quality time practicing and participating with the game artifacts. None of this is possible, unless playing a game is a source of joy to them. They are the key to the success of the game. Two, four, and sometimes many willing players play against each other, or against a machine. This raises interesting challenges to game designers.

'Is the new game able to give them the feeling of 'time well spent feeling at the end? How do we ensure that they enjoy the game? Why should they come back to play again?'

Lastly, how should designer take advantage of the fact that the players willfully enter the game world, however strangely the world may work. Players never question the quixotic nature of behaviour of its element nor challenge the rules.

'Is not this an opportunity to ask him to do things that he would not have done in the real world?'

COLOR CHECKERS

HOW TO PLAY

What you need:

- 10 Pieces of each color Red, Yellow, Blue (30 pieces total.)
- A Hexagonal grid
- 2 players eager to become champions.

Objective:

- To capture your opponents tokens so that he can no longer Make three in a row. (In other words, until he has only 2 tokens left)
- Create white or black color from pieces.
- Score maximum points.

Constraints:

- You are not allowed to make 3 in a row during the drop phase.
- You can't place tokens to the edge of the grid.
- You may not capture an opponents token when it is part of a 3 in row he made.
- No diagonal moves are allowed.

Instructions:

Drop phase:

- Players can choose any color, color left will be also placed on board.
- Decide who goes first.
- Players alternate placing their tokens on the game board.
- Once a token have been placed, the move phase begins.

Move phase:

- Players take turns moving their tokens, one at a time, in any direction, player can jump over other pieces, but not his own.
- To score 1 point, Player have to jump to any other pieces, which changes the opponents pieces into respective sec. color (check the reference chart)
- To score 5 points, form a trio, of either RGB or CMY. (after forming a trio will remove all three pieces from board.)

What is a good game?

Optional points

Good games allow purposeful interaction between players

There are two kinds of interactions. Purposeful interactions, that are part of game mechanics. These interactions are part of the planned game mechanics and take the game forward. You may have to borrow something from the opponent, give him something, send a coded message to others and so on.

Social interaction between players. This is one reason children and even grown ups come to play games like Cards (bridge), Carom.

Primary purpose of the traditional games was to bring players together in a game world. This has been a critical point against digital games. They have a tendency to isolate players by locking him into a digital game world playing with often an imaginary enemy.

Playing games together in same space allows social interaction. Hybrid games can potentially bring this ambience back to digital games. This also offers a good learning opportunity for children. Besides, they also learn to be part of the team and understand social interaction.

Good games allow competitions to be held

Competitions are difficult (if not impossible) to organize when the game is completely based on luck. Competitions in snakes and ladders do not make sense. Such competitions tend to be organized with money at stake. (like Hush on card games)

Unless the game is spectator oriented, competitions are difficult to sustain. With the enclosure in specially made glass cage, squash became popular. While Kabbadi became popular with higher stakes. Typically, the games have to be fast paced and of shorter duration to become spectator worthy. The games can be long if they are typical vacation games which do not have spectators.

Good games should also be easier to learn

Look at Zenga. You learn the rules in seconds! Though it is not always possible to design games that are easier to learn, it is a desirable feature greater learning time can be discouraging in specific contexts. Learning demands motivation before they have experienced the game.

If you generalize the list across different games, it includes, Board with graphics, player's pieces, dice, racket, specially designed table as in table tennis and billiard and so on. In digital games it includes gaming consoles, special hardware if tangible interfaces are used, and the software that backs the actions. Some games also rely on standard hardware like tablets, mobile phones and monitors.

Field games are highly dependent on the quality of infrastructure. Some games use natural or partially curated natural surfaces. Tennis is played on clay courts, lawn (besides on artificial surface like AstroTurf). Golf has curated course and cricket is played on the pitch that is specially prepared with expectations that it will behave to suit the home team capabilities. The unpredictable behaviour of the natural component adds more uncertainty, as these natural components are susceptible to weather.

Artifacts used in these field games are continuously upgraded by incorporating new technologies and materials. Typically when the stakes are high, the games are more susceptible to technology interventions. This has positively influenced the players' performance as well as assist referees judgments. Tennis, cricket are some of the examples.