

Board Game Mechanics

Name: _____

Board game mechanics are the physical and mental actions players take as they play the game. Mechanics shape how a game works, like simple machines that together make a compound machine. There are 51 listed mechanics on BGG, how many have you played?

Write an X in the box if you've played a game using this mechanic.

	Action Selection		Take That
	Simultaneous Action Selection		Trading
	Programmed Actions		Hidden Role
	Worker Placement		Card Drafting
	Role Selection		Campaign/Battle Card
	Push Your Luck		Chit Pull
	Area Control/Influence		Dice Rolling
	Area Enclosure		Hand Management
	Modular Board		Deck Building
	Route/Network Building		Pattern Building
	Tile Placement		Set Collection
	Area Movement		Pickup & Deliver
	Point to Point Movement		Secret Unit Deployment
	Auction/Bidding		Variable Player Powers
	Partnerships		Coop**

****You are not allowed to make coop games.**

Mechanics are the specific ways that players physically play the game. There are around 50 commonly used mechanics like Roll and Move, Action Point Allowance, Set Collection, and Pattern Recognition, but there are many new and innovative mechanics that game developers have created. In Niagara, clear plastic disks move based on player decisions simulating a river's movement. Game manufacturers are always looking for unusual and new mechanics in game prototypes.

In strategy games, the mechanics most commonly used provide opportunities for players to make decisions about the course of the game, rather than luck. These mechanics provide the opportunities that players have in the game, and any modifications to the mechanics are designed to construct the decision-making opportunities that the game designer wants them to have. These actions are mostly physical, like laying a tile or drafting cards, but can also be mental like bluffing or memory. As a game designer, these are your tools to create experiences for players where they get to make decisions as they play.

Another way to think of a game mechanic is to think of it as a set of rules. Mechanics can be thought of as a set of rules that form a new rule unto themselves. These sets of rules define different actions a player can take. Some argue that a game equals rules and rules equal game, and if that is true, then mechanics determine the game itself.

Example: The mechanic Rock Paper Scissors.

RPS is a set of rules and is a game, and one could argue that RPS. Let's look at the rules:

1. Players close one hand into a fist.
2. Players bounce their hands simultaneously and count to three.
3. Players say "shoot" after the third count and simultaneously reveal rock (closed fist), paper (hand held flat) or scissors (index and middle finger forming a v shape).
4. Players determine the winner (rock beats scissors, scissors beats paper, paper beats rock).

Thus, this set of rules forms the set known as Rock Paper Scissors. Sometimes the rules vary slightly for Rock Paper Scissors, but the essential components are known and adhered to. Because of this, when a game of RPS is offered, players can easily join in if they already know it. In addition, if a game designer wanted to add RPS to a game, many players would know what to expect. The designer *should* explain the rules to rock paper scissors, but in general, those rules should be similar to how another designer would explain them.

There are many different game mechanics that function the same way—they are sets of rules that players (and designers) know and their use helps define a game and how it is played. They are known to players and game designers, and you, the burgeoning game designer, must learn these mechanics to help you play existing games and to develop your own game.

Themes can often have any and all mechanics applied to those themes, but successful game designers either choose mechanics carefully that fit their theme OR they create their own mechanics. Publishers are always looking for new mechanics, but are also willing to look at games with existing mechanics utilized in a fresh and new way. For you as the designer, your choices should fit your theme and contribute meaningfully to both player decision-making and development of the conflict.

In the world of board game design, there are many, many mechanics, but we are going to only focus on about twenty. For your game, you will focus your efforts on choosing and successfully implementing one mechanic at first, and then later a second mechanic if you wish.

Choosing Your Mechanics

You will choose one mechanic to use in your game. You may use others, but initially you will choose just one.

I have sorted the mechanics into seven categories by function/purpose:

- **Mechanics that control the number of player actions/choices**
- **Mechanics that physically interact with the gaming space**
- **Mechanics that control player movement**
- **Player interaction mechanics**
- **Classic Game Mechanics**
- **Abstract-ish Mechanics**
- **Specialized-Purpose Mechanics**

Keep in mind; these categories are NOT concrete and many mechanics can be skillfully applied so that they may fulfill the function of another category. Meaning, a player may bid for first player status, or bid for the number of actions she wants to take. However, for the purposes of introduction, these categories may be helpful to help you learn the mechanics.

In addition, for class purposes, I have labelled each mechanic for its suitability for use for this class:

1. Essential Mechanics (those that have been historically been used most often by Apogee students, in **bold**)
2. Less-Commonly Used Mechanics (have an asterisk*)
3. Forbidden Mechanics (have two asterisks**)

*If you would like to see the games that use each type of mechanic, see
<http://boardgamegeek.com/browse/boardgamemechanic>.*

Mechanics that Control Player Actions

These are mechanics that allow a game designer to specifically control the number of actions a player may take on her turn. Most student games use one of these.

Action Selection Simultaneous Action Selection Programmed Action/Movement Worker Placement Role Selection	Push Your Luck* Roundel Wheel* Time Track* Variable Phase Order*
--	---

Mechanics that Physically Interact with the Gaming Space

These are mechanics that players can use to build, connect, and control areas on the game board or gaming space. Some of this may take place during setup, others might occur during the game.

Area Control/Influence Area Enclosure Modular Board Tile Placement Route/Network Building	Crayon Rail System*
--	---------------------

Mechanics that Control Player Movement

These mechanics provide different ways to have players move their pieces around the board or gaming space.

Area Movement Point to Point Movement	Roll and Move**
--	-----------------

Player Interaction Mechanics

These mechanics require out-of-turn interaction between players, so impact on other players is greatest.

Auction/Bidding Partnerships Take That Trading Hidden Role	Betting/Wagering* Player Elimination** Voting** Acting** Cooperative Play** Role Playing**
---	---

Classic Game Mechanics

These mechanics are common on their own to being readily adaptable in many different types of games. Card games, war games, dice games—these mechanics can be used in almost any game.

Card Drafting Campaign/Battle Card* Chit Pull System Dice Rolling Hand Management Deck Building	Trick Taking* Hex and Counter** Simulation**
--	--

Abstract-ish Mechanics

Abstract games like Chess, Go, and Parcheesi are pure mechanics-driven games. There is no story to connect the mechanics, and the mechanics are the game.

Pattern Building* Set Collection	Pattern Recognition* Grid Movement* Memory*
---	---

Specialized-Purpose Mechanics

These mechanics provide their own unique ways to play games, based on their function.

Pickup and Deliver Secret Unit Deployment Variable Player Powers*	Line Drawing** Paper and Pencil** Storytelling** Commodity Speculation** Stock Holding** Roll and Place**
--	--

*less commonly used

**no.

Mechanics that Control Player Actions

These are mechanics that allow a game designer to specifically control the number of actions a player may take on her turn.

Action Selection

Players' choices are limited by a specific number of actions that can be taken on a turn.

- Maybe they can repeat some actions, or all actions, or maybe they can't.
- Or, each action costs a certain amount, and players can "spend" however many points they have on the actions they want as long as they don't exceed their point allowance.
- By scaling the point values, the most important or challenging tasks can cost more and require more planning on the part of the players to use that action.
- Players may gain or lose action points as they play depending on the game design.
- *Games: Babel, Pandemic, Hey That's My Fish!, Survive!, Dirty Birdy*

Simultaneous Action Selection

Players reveal their actions simultaneously.

- This means players must commit to a choice and the possible ramifications if others' choices directly interfere with theirs; therefore, bluffing may occur.
- Possible results include all players can take an action selected or only person can take the action.
- Rock Paper Scissors is a variant.
- *Games: Apples to Apples, Labyrinth Treasure Hunt, Niagara, PPG, Shazamm!*

Programmed Action/Movement

Players have cards or tiles that have specific actions on them, and choose from these tiles or cards to plan several moves at once.

- These cards may be revealed all at once or individually.
- Players may move one at a time or all at once, depending on the desired level of chaos.
- This mechanic can lead to a high level of player interaction due to the need to commit to choices that can easily be affected by others.
- *Games: Duck Duck Go!, RoboRally, Jamaica, Snake Lake*

Push Your Luck

Players take actions during their turn and may repeat as many times as they wish. As they continue, the possible gain increases, but so does the possibility of loss of progress if an adverse condition presents itself.

- *Games: Can't Stop!, Crash Course, Celestia*

Worker Placement

Each player has a pool of meeples and places them on specific locations on the board that provide specific actions, resources, or other benefits (turn order, scoring, and so on).

- If the maximum number of pawns that can be placed in an area is reached (which may be only one), then other players are prevented from placing a pawn on that space.
- Players may use pawns defensively to block other players from utilizing spaces as well as offensively to gain benefits.
- In games where players may own buildings or other structures, they may gain resources from opponents who use those spaces.
- *Games: Stone Age*

Role Selection

Players choose a character or role in order to perform particular action/s during a turn.

- *Games: Citadels, Rattus*

Mechanics that Physically Interact with the Gaming Space

These are mechanics that players can use to build, connect, and control areas on the game board or gaming space. Some of this may take place during setup, others might occur during the game.

Area Control/Influence

Players try to gain and retain control of specific, pre-existing areas on the board.

- Victory is determined by whomever controls the most, or most important, or some other determining factor, regions on the board.
- Depending on the designer's goals, multiple players may have a presence in these regions, or regions may be held solely by one player.
- Regions can be strengthened, or held permanently, or change ownership depending on game play.
- *Games: Finca, Fjords, Kahuna, Rattus, Risk, Tower of Babel*

Area Enclosure

Players try to gain and retain control of sections of the board by creating enclosing player-controlled sections.

- The regions for conquest are created during the game by fence-like pieces, or some other type of bit that fulfills the task.
- Maybe these pieces can be moved during the game, or maybe they are fixed for the remainder.
- As more of the board is being claimed and closed off, the end of the game should approach accordingly.
- *Games: Carcassonne, Oasis, Go*

Modular Board

The board is not one fixed square or rectangle but is made of smaller units that can be combined in different ways which ensures that the board will be different for each game.

- The board can evolve as the game is played, or the board can be set up in its entirety at the beginning of the game.
- All board segments can be used, or more may be included with the game than is actually used to create a high level of replayability.
- *Games: aMAZEing Labyrinth, Dragonriders, Forbidden Island, Hey That's My Fish!, Ricochet Robots, Survive, Tongiaki*

Tile Placement

Players place tiles on a game board or on the playing surface itself.

- The placement of the tiles may be significant in and of itself where the location of the tile may change the value of points earned.
- Or, players place tiles to create the playing space before or during the game and play other game pieces on those tiles, and the placement of a token allows the player to draw resources, points, or some other benefit.
- Tiles are usually similarly shaped, but not always.
- The tiles may form the game board or be placed atop the game board space.
- Players may have one tile in hand, or the rules may allow for the player to have a selection, to earn tiles through auction, or some other method.
- *Games: Alhambra Carcassonne, Dante's Inferno, Fjords, Maori, Marrakech*

Route/Network Building

Players create a network between different locations on the board using tokens, bits, crayons, or other materials.

- The networks may be permanent during the game or may be changed by the players or by game events.
- *Games: Expedition, Ticket to Ride, Trans Europa, Tsuru*

Mechanics that Control Player Movement

These mechanics provide different ways to have players move their pieces around the board or gaming space.

Area Movement

Players move the pieces across the board.

- This movement may be based on the surrounding areas, or maybe players can move to any area they want, or maybe it is based on terrain types, and so on.
- Players may have different movement abilities or may have limitations or advantages placed on them, temporarily or permanently or other.
- This is different than Point to Point Movement (see below) because players are not limited to following specific pathways.
- *Games: Risk, Panic Station, Red November*

Point to Point Movement

Players move their pawns across the board along specific pathways.

- These pathways may be fixed on the board at the outset or may develop as the game is played.
- These pathways may be changed as the game is played, depending on the designer's goals.
- Game designers may also want to think about how many segments are optimal in a game, how many segments a player can traverse during a turn, and how many intersections and outlying segments are needed to keep it interesting.
- *Games: HTMF, Ice Flow, Kill Dr. Lucky, Pandemic, PPG, Tongiaki*

Player Interaction Mechanics

These mechanics require out-of-turn interaction between players, so impact on other players is greatest.

Auction/Bidding

Players compete head to head for resources, bits, or other elements of value in the game, and players are the ones determining the value of those elements.

- Rather than the game designer setting prices for goods, resources, or other game elements, players do it via auction so values can reflect the players' need for them as they play.
- Whomever bids the most (most, resources, points, or some other value) wins.
- Auctions can vary where bidding is secret (players commit their bids in their hand or behind a screen) or public.
- Bidding may continue, increasing as players continue to bid until all but one have passed, or each player may bid only once.
- Players may pass and then join in the action later, or once they pass, they are out of that bidding round.
- *Games: Detroit Cleveland Grand Prix, Hollywood Blockbuster, Modern Art, Oasis, Shazam!*

Partnerships

Players work with one or two other partners against single players or other partnerships. These partnerships may be established at the beginning of the game, during the game, change throughout the game, or may simply be permanent throughout. If partnerships are used, the designer should be mindful in constructing how information or resources can be shared between the partners and to make sure that each partner has the opportunity to make choices independently from their partner. If unofficial partnerships form in the game often during playtesting, the designer should formalize their inclusion or should address the aspects of game design that allows them to form.

Take That

Maneuvers that directly attack an opposing player or do something else to impede their progress.

- Sometimes players may target others' resources, trying to destroy them before their own holdings are destroyed.
- Some games pair Take That with Player Elimination.
- *Games: Crash Course, Walk the Plank!*

Trading

Players exchange resources or other game elements amongst each other.

- Sometimes players may be able to trade with the game itself, although expensively.
- Some games simply allow players to trade, period, while others allow trading with the active player.
- Or, each player gets one chance to trade
- Or there are limits on the number of trades or goods traded, and so on.
- Players should be incentivized to trade or players may be unwilling to do it.
- *Games: Castle Panic, Monopoly, Pandemic*

Hidden Role

Players are assigned secret roles at random.

- The point of the game is achieving the collective goals of your secretly-assigned (and often unknown to you) teammates, while at the same time not giving away your secret identity (because the other team's members aren't sure about your team status either, and if they figure it out, their team has a huge advantage).
- *Games: Avalon, Coup, The Resistance*

Classic Game Mechanics

These mechanics are common on their own to being readily adaptable in many different types of games. Card games, war games, dice games—these mechanics can be used in almost any game.

Card Drafting

Players draft cards from a selection available for use during a current or later turn.

- Cards may be face up or face down, or a combination.
- Limits on the numbers, or values, or types of cards may be placed.
- Players may have hand limits on how many cards they may have.
- Players may also be able to draw up to a maximum hand size, or players may gain or lose the maximum hand size.
- Players may have to draw cards in order, or may choose cards in some other fashion.
- *Games: Alhambra, King of Tokyo, Ticket to Ride*

Campaign/Battle Card Drive

Cards have specific abilities, and players' choices are restricted to those held in hand.

- These cards may have offensive or defensive qualities, or positive or negative impacts for various players, or may just have simple actions that can be taken.
- Players' choices are restricted to the cards in hand, so they play cards that will strengthen their position, but may be required to play games that weaken their position if not other cards are available.
- This is seen foremost in war games, but may be used in other games.
- *Games: Powerpuff Girls: Saving the World Before Bedtime, Castle Panic*

Chit Pull System

Small tokens, called chits, are pulled from a bag or face-down pile or some other fashion.

- These chits introduce players, abilities, obstacles, prizes, or other elements.
- The designer uses chits to have a total known number of all choices, options, obstacles, or other element pre-set at the beginning of the game.
- The value and impact of these chits may vary and the combination of these chits should reflect the designer's goals.
- *Games: Castle Panic, Rattus*

Dice Rolling

The rolling of dice, and the resulting numbers (or letters, symbols, or other) determine the outcome of specific actions, or determine the actions or choices a player has.

- Often used in battle, dice can be creatively applied when a fairly random element (with specific, known options) is desired.
- Players may have the ability to increase or decrease the value of a die roll by acquiring these abilities during the game.
- *Games: Jamaica, Lucky Loop, King of Tokyo, Mason, Ninja vs. Ninja, Roll Through the Ages, Survive!*

Hand Management

Players have a set of cards or tiles and must make decisions about what cards or tiles to play and when.

- This allows for a wide variety of choices available in a game, but only a small amount available to players per turn.
- *Games: Alhambra, Castle Panic, Detroit Cleveland Grand Prix, Dracula, Hare and Tortoise, Kahuna, Modern Art, Surf's Up Dude, Ticket to Ride, Tsuru, Wasabi*

Deck/Pool Building

Players begin the game with a starting set of cards, and use a small set of those cards on their turn. Using the combined cards' actions, players add other cards to their deck from the game supply.

- This allows players to customize their hands to allow them to maximize their chosen strategy based on the options available.

- *Games: Dominion*

Abstract-ish Mechanics

Abstract games like Chess, Go, and Parcheesi are pure mechanics-driven games. There is no story to connect the mechanics, and the mechanics are the game.

Pattern Building

Players use game resources to construct certain patterns on the board. Often seen in abstract games.

Set Collection

Players collect sets of resources or other game elements, which are then used for money, purchasing game elements, or completing some other task.

- Players may compete to collect the most of a set, all of a set, all of the various types available as a special set, and the items in a set may be abstract or thematic.
- *Games: Alhambra, California, Finca, Forbidden Island, Fossil, Hare and Tortoise, Hoity Toity, Hollywood Blockbuster, Niagara, Pandemic, Save Dr. Lucky, Spy Alley, Ticket to Ride, Tower of Babel, Zooloretto*

Specialized-Purpose Mechanics

These mechanics provide their own unique ways to play games, based on their function.

Pick-up and Deliver

Players gather resources in specific places on the board and take them across the board to deliver them to other areas.

- Designers may wish to think about how many goods can be transported
- If the types have different requirements
- if the vessels used to transport them can be upgraded or enlarged
- if resources are unlimited or finite
- if linkages between locations are pre-established or must be constructed as the game is played.
- *Games: Empire Builder, Niagara, Flash Point, Pirate vs Pirate*

Secret Unit Deployment

Each player's pawns or meeples have secret values that are not immediately visible but are revealed at specific moments, interactions, or at the end of the game.

- Individual players may be aware of their own pawns' values or they may be unaware of the values.
- *Games: Survive, Scotland Yard, Stratego*

Variable Player Powers

Each player has his or her own ability, skill, or additional components that add strength or weakness for each player.

- This asymmetrical quality can help ensure that each player does not do the same thing each turn, but care must be taken to be sure that the powers are balanced.
- Player powers may be established at the beginning of the game for its entirety or may change as necessary through the game.
- *Games: Bacchus' Banquet, Forbidden Island, Mr. Jack, Neuroshima Hex!, Pandemic, Rattus*

Other Mechanics

Acting**	Grid Movement*	Player Elimination**	Simulation**
Betting or Wagering*	Hex and Counter**	Rock Paper Scissors*	Stock Holding*
Cooperative Play**	Line Drawing**	Roundel Wheel*	Storytelling**
Commodity Speculation*	Memory*	Role Playing**	Time Track*
Crayon Rail System**	Paper-and-Pencil**	Roll and Move**	Trick-taking*
Deduction*	Partnerships*	Roll and Place**	Variable Phase Order*
Dexterity**	Pattern Recognition*	Roll and Write**	Voting**

**=used rarely, if ever*

***=NO.*

Acting**

Players use physical actions to pantomime or act out specific tasks and ideas.

Betting or Wagering*

Players speculate on the outcome of certain events, or a resource's value, or some other occurrence where the outcome is immediate, or progresses during the course of the game, and they have no control over the final result.

Cooperative Play**

In coop games, players work together to beat the board. Successful coop games have a strong system so that the board is an equal, or stronger than equal, adversary. In addition, as the game is played, the board should increase in strength or difficulty. Designers should be mindful that the game is designed to prevent one player from taking control, and can think about to make the game suitable for solitaire play as well.

Commodity Speculation*

The value of resources change over the course of the game, and players invest in specific resources, regions, characters, or other game elements in the hope that the value of these resources will increase. Sometimes values can go down, but sometimes the value never goes down but can only increase.

Crayon Rail System**

Players use wipe-off crayons on a dry-erase board to construct lines, connections, patterns, and routes to create a playing space that is redrawn every time.

Deduction*

Players use available information to determine the solution to a puzzle, a player's identity, or some other configuration. Designers need to figure out the types of information available to players and how that information can be obscured, revealed, and recycled so each game experience is different.

Dexterity**

Players' physical ability and skill is needed to further their position. Balancing, flicking, rolling, and other physical actions can be used in Dexterity games.

Grid Movement*

Players move their pieces on a grid much like in chess. The grid can be any tessellating shape or tiling combination.

Hex and Counter**

Players move their pieces on a grid that is composed of hexagonal shapes. Often seen in wargames, player pieces are often chits.

Line Drawing**

Players draw on pieces of paper to form desired shapes and figures.

Memory*

Players must utilize their memory skills to save and utilize later information about the game state as it is played. Trivia games use memory to access players' prior knowledge (or lack thereof) in a game.

Paper-and-Pencil**

Players record information about the game state (changes in player state, responses, etc) on paper. Recording score on paper is not a Paper-and-Pencil mechanic.

Partnerships*

Players work with one or two other partners against single players or other partnerships. These partnerships may be established at the beginning of the game, during the game, change throughout the game, or may simply be permanent throughout. If partnerships are used, the designer should be mindful in constructing how information or resources can be shared between the partners and to make sure that each partner has the opportunity to make choices independently from their partner. If unofficial partnerships form in the game often during playtesting, the designer should formalize their inclusion or should address the aspects of game design that allows them to form.

Pattern Recognition*

As the game, players must recognize shapes or patterns that develop through the addition of game pieces. Often seen in abstract games, PR can be creatively applied to non-abstract games to give gameplay a different take on familiar subjects. Shapes can be scored accordingly to the game requirement, and it may be in players' interest to not acknowledge some shapes to allow other shapes to evolve for greater scoring possibilities.

Player Elimination**

In games with more than three players, players defeat opponents during the game in order to be the last player remaining in the game. Two player games are not Player Elimination.

Rock Paper Scissors*

A circular hierarchy determines win and loss between players.

Options available to players have an A, B, C nature, where A beats B, B beats C, and C beats A. A designer chooses this when he or she wants to have a circular hierarchy to determine win and loss between players. A subset of Simultaneous Action Selection. Many games have an underlying RPS-like hierarchical structure, but due to the number, complexity, and availability of components, it may be impossible to calculate success rates exactly as players play.

Roundel Wheel*

Available player actions are distributed on a wheel, and players move along the roundel wheel to select their action for the round. A designer would choose this when the cycle of actions that players are to take is known, but players are given the ability to determine their speed and exact desired actions. The number of times an action appears, the cycle of actions, and the number of steps a player may take are all decisions the designer may make.

Role Playing**

Players assume the role of pre-constructed or self-constructed characters and interact in a playspace where individual attributes determine success or failure.

Roll and Move**

One of the most basic mechanics and familiar to most board game players. Players roll a die to determine the number of spaces one can move or sometimes the actions that can be taken or resources gathered. The randomness of Roll and Move can be ameliorated somewhat by creating choices about the dice and how players use them.

Roll and Place**

Players roll dice, usually a lot of them, and place them on strategic places on the board based on the dice rolls depicted. For example, to claim a farm, a player may have to roll three 3's. That player rolls all the dice, then may choose to claim the farm by placing three 3's if they have been rolled, or the player may place those 3's elsewhere. If the player doesn't roll the 3's, they may place the other dice where possible. If placing dice is impossible, the player may forfeit one or more dice, or their turn.

Roll and Write**

Players roll dice, then use the numbers, colors, symbols or other aspects of the physical dice to record progress on scorepads.

Simulation**

The theme is the most important aspect and the game closely models the theme as accurately as possible. Most commonly seen in war games.

Stock Holding*

Players buy, hold, and sell stocks in fictitious entities in the game. The player who owns the most of the stock reaps the greatest rewards, can exercise decision-making ability, or pay for deficits as the game requires.

Storytelling**

Players tell stories, either using a printed text or of their own making.

Time Track*

A form of variable player turn order, players hold positions along a linear track. The last player on the track takes their turn until they are no longer in last place, often with multiple actions along the way. Other players in the lead may change the track ahead, so players must balance taking multiple actions with a changing landscape ahead.

Trick-taking*

When two or more players play a card or tile in a round against each other, and one person wins all cards or tiles played due to some ranking system. This mechanic tends to dominate a game.

Variable Phase Order*

Each round or turn is comprised of several phases and these phases may occur in a different order, or not every round, or in the order of a player's choice, or some other method.

Voting**

Players' votes decide the outcome of certain game events or even rules. Factors may affect the vote like resources or some other quality, but care must be taken to ensure that players don't gang up on one person or create some other unfair inequality. As such, this may be best suited for party games.

****No.**