ZENDO

DESIGNED BY KORY HEATH

2-5 | MEDIUM | COMPLEX

EQUIPMENT

- All available pyramids of 3 – 5 colors
- Yes and No tokens, 20 of each
- Tokens of a third type

RECOMMENDED EQUIPMENT

- Zendo Rule Cards

It is possible to just think up your own rules when playing Zendo, as countless players have done for many years, but these cards make being the Moderator a whole lot easier. Each of the 52 cards generates several different permutations of a rule concept, with the deck as a whole creating hundreds of unique rules.

OVERVIEW

Zendo is an inductive logic game in which the players compete to figure out a secret rule. One person will moderate, providing answers to questions about the secret rule. Players take turns building new structures of game pieces, each of which will give them insights about the unknown attributes of the secret rule.

SETUP

Get out all the pieces and give each player two answering tokens, one that means Yes and one that means No. Choose one person to be the Moderator. This should be the most experienced Zendo player or the person who has read these rules.

SUMMARY OF PLAY

The Moderator begins by selecting a secret rule and marking the card with two clips. With new players, always start with Easy cards.

The Moderator then creates the first two structures, using one or more pieces for each. One of these structures will follow the secret rule, and will be marked with a Yes token, while the structure that doesn't follow the rule will be marked with a No token.

Players will then take turns, each time building a new structure, finding out if it follows the rule or not, and optionally making a guess at the secret rule. But to make an official guess, players must spend "guessing tokens," which are earned by correctly predicting whether or not a new structure follows the secret rule.

GOAL

The first player to correctly guess the secret rule wins!

HISTORICAL NOTES

Zendo was first published in 2001 in issue #14 of *Hypothermia*. The following year, it appeared in *Playing with Pyramids*, and in 2003 a standalone edition was released. An updated edition was published in 2017 using pyramids, wedges, and blocks.

Designer Kory Heath was inspired to create Zendo by the classic card game Eleusis, and has written at great length about the design history of the game. To read all about it, please visit his webpage:

koryheath.net/zendo/design-history/

Zendo originally had the theme of the players being students of a Zen master. Long-time players may still prefer this; others may enjoy a different backstory, such as researchers using the scientific method. But after years of playing Zendo with various themes, we've found that the best option is to present the game with no theme at all. Enjoy!

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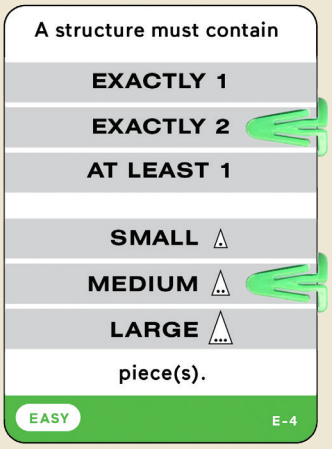
ZENDO (CONT.)

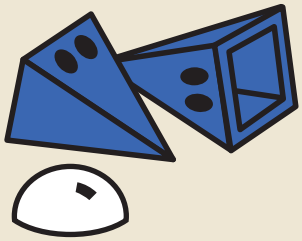
EXAMPLE

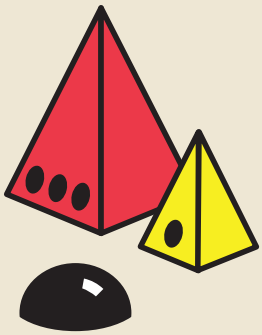
Suppose the Moderator chooses this rule card, and marks it as shown:



The correct answer will then be that a structure must contain exactly two Medium-sized pyramids.

The Moderator then builds and marks this pair of structures:



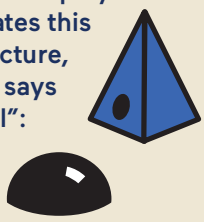


Now the players will start formulating theories about what the rule could be.

Here are some possibilities:

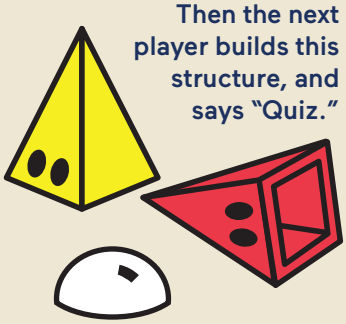
- Must contain only blue pieces.
- Must contain two pieces of the same color.
- Must contain zero Larges, or zero Smalls.
- Must contain zero yellows, or zero reds.
- Must contain zero upright pieces.
- Must contain pieces pointing in opposite directions.

The first player creates this structure, and says "Tell":



This doesn't follow the rule, so the Moderator marks it with a No token.

Then the next player builds this structure, and says "Quiz."



After everyone guesses, the Moderator marks it with a Yes token.

TURN ORDER

Each player's turn has three phases:

1) Build a new structure
2) Choose "Tell" or "Quiz"
3) Make a guess, or pass

1) BUILD A NEW STRUCTURE

Create a new structure using one or more pieces from the global supply. Place it near the others, but not too near. You may arrange its pieces in any fashion, including leaning pieces against each other and stacked up in various ways.

2) CHOOSE "TELL" OR "QUIZ"

Tell: If you choose "Tell," the Moderator will mark your new structure with a white or black token to indicate whether your structure follows or does not follow the hidden rule. "OK," the Moderator will often say, "I must tell you that this structure does *not* follow the rule."

Quiz: If you choose "Quiz," all players must guess whether your new structure follows the rule or not. Everyone picks up their answering tokens and will choose one to reveal. Conceal your answer in your fist, hiding your other token from everyone's view. Hold your fist out over the playing field, and wait for everyone else to do the same. When everyone is ready, all will reveal their guesses. The Moderator will mark the structure with the correct answer, then they will award a guessing token to each player who answered the Quiz correctly.

3) MAKE A GUESS, OR PASS

Payment Required: You can only make an official guess if you've earned a guessing token in a Quiz. You may choose to spend one or more guessing tokens to try to guess the Moderator's rule, or you can pass and save up your guesses for later. To make a guess, hand a guessing token to the Moderator, then state your guess as clearly as you can.

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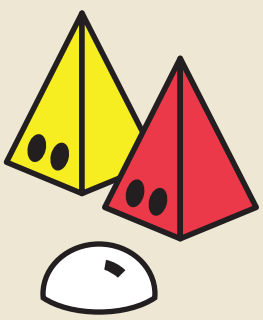
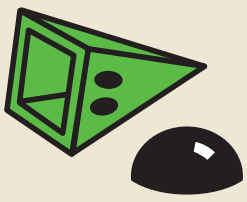
Clarify the Guess: If the Moderator does not fully understand your guess, or if it is ambiguous in some way, the Moderator will ask clarifying questions until the uncertainty has been resolved. Your guess is not considered to be official until both you and the Moderator agree that it is official. At any time before that, you may retract your guess and take back your token, or you may change your guess. If any structure on the table contradicts your guess, the Moderator should point this out, and you may take back your token or change your guess. It is the Moderator's responsibility to make certain that a guess is unambiguous and is not contradicted by an existing structure. All players are encouraged to help the Moderator with this process.

Moderator Disproves Guess: After you and the Moderator agree upon an official guess, the Moderator will disprove it, if possible. The Moderator can disprove a guess in two ways: by building a structure which follows the rule but which your guess says does not, or by building a structure which does not follow the rule but which your guess says does.

Example: Consider the game-in-progress shown on the previous page (with the rule being "a structure must contain exactly two Medium-sized pyramids.") Suppose a player makes this guess: "The structure must contain at least one flat piece." The Moderator could disprove this guess in either of two ways, both shown below: by building a structure, marked Yes, which contains zero flat pieces, or by building a structure, marked No, that contains a flat piece. Either of these possibilities will show you that the guess is incorrect.





Typical Script: A common exchange tends to occur when a Moderator sets up a counter-example:

> *Moderator:* "According to your guess, would this structure follow the rule?"
>
> *Player:* "Yes."
>
> *Moderator (marking the new structure with a No token):* "Well, in fact, it does NOT follow the rule."

Option to Repeat: Once the Moderator has built a counter-example and marked it appropriately, you may spend another guessing token, if you have one, to take another guess. You may spend as many of your guessing tokens as you wish during this portion of your turn. When you are finished, the action passes to the next player.

HOW TO WIN

If the Moderator is unable to disprove your official guess, you win!

ADDITIONAL RULES

Always Use Both Clips: The majority of the secret rule cards feature two decision points for the Moderator to choose between before starting. Clips are used to "lock in" the exact details of each rule. But the Moderator must always attach both clips to the rule card, even if it has fewer than two choices, in order to avoid giving away any sort of clue about the secret rule. (Rule cards with fewer than two choices have a spot labeled "decoy" as a reminder.) Most options can be marked from either side, but some will require the clip be on the left, or the right. The moderator should randomize which side they mark when possible, so that no meta-level information about the rule is revealed.

No Embellishments: The Moderator must only consider the properties listed on the card. Follow the words on the card exactly. Do not change, add to, or embellish the rule as you play. (If you're inventing your own secret rules, please read the advice on page 9 in the section on Advice for Moderators, "Be Cafeful When Going Off-Card.")

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Breaking Down Old Structures: As the game progresses and the table fills up with structures, specific pieces may become scarce. If you are building a new structure and the piece(s) you'd like to use are not available, tell everyone what you're looking for. The Moderator will choose a structure to break down to provide you with the parts you need. The Moderator will try to take into account the input of the players, who may have opinions about which structures are more important to keep intact.

Moving Structures: Once a structure has been established, it's important for it never to be changed. If space is needed (either to help distinguish a structure from another, or to make room for new structures) then a structure may be moved, but only by the Moderator. If someone accidentally disturbs the arrangement of a structure's pieces, it is up to the Moderator to restore the table to its previous state. There is no penalty for such an accident. The Moderator must make sure that any moved or rebuilt structures are as similar as possible to the way they had been before. No player is allowed to touch a structure after it's been marked.

No Outside References: Rules may not refer to anything outside of the structure itself. This "no outside references" rule includes things or people in the room, other structures on the table, time (especially the order in which things were done as the structure was being built), and the marking tokens. The structure should be able to be rotated or even moved to another room without affecting whether or not it follows the rule. There is one exception: the playing surface can be used as a reference point for groundedness and orientation.

Equivalent Secret Rules: Note that you win simply by guessing a rule that the Moderator is unable to disprove. This may or may not be the same rule the Moderator had chosen. For example, perhaps the secret rule was, "The structure must contain zero yellow pieces." A player can win the game with the guess, "The structure must contain only red, blue, or green pieces." These two secret rules are not stated in the same way, but are identical in effect.

PLAYING WITH TWO

Zendo was originally designed for three or more people, but there are a couple of ways to play with just two.

Puzzle Mode: This option is basically assisted solitaire. One player simply serves as the moderator for the other, marking new structures when called upon, and building counter-examples as needed when guesses are made. There is no need for guessing tokens or quizzes.

Head-to-Head: If you're feeling competitive, players can alternate roles and compare scores. A game will consist of two rounds, with each player solving once and moderating once. After each round, the player will receive a score, based on how long it took them to guess the rule.The player with the lower score wins!

Score: Your score will be the total number of structures on the table at the end, with additional points added for any structures that were broken down during the game. You also receive two extra points each time you guess and are incorrect. Guessing tokens are used to track extra points for incorrect guesses and dissolved structures. There is no need for quizzes, so guessing stones will not be used for any other purpose. Be sure to make a note of the first player's score before starting the second puzzle.

Equal Difficulty: Before starting a head-to-head match, players must agree on the difficulty level of the rules they will be using. If the players choose to create their own rules rather than using the cards, they must still attempt to scale the difficulty level of their rules to match the challenge they agree upon.

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ZENDO (CONT.)

ATTRIBUTE DEFINITIONS

Color: Every piece has a color. A structure "contains a color" if it contains any pieces of that color.

Size: There are three sizes of pieces: Small, Medium, and Large. A structure "contains a size" if it contains any pieces of that size. Sizes are related to each other in specific ways, such as "larger," "smaller," "largest," and "smallest." A structure always contains a "largest size," and all of the pieces of that size are referred to as "the largest pieces in the structure." Similarly, a structure always contains a smallest size. If a structure contains exactly one size, those pieces are both the largest and the smallest pieces in the structure.

Pip Count: Each piece is marked with "pips" to indicate its size. This number represents a piece's "value" or "pip-count." A group of pieces has a pip-count equal to the values of all its pieces added together. Note that the pip count of any particular subset of pieces might be zero, and that zero is an even number.

Orientation (Upright/Flat/Weird): These three possible orientations are mutually exclusive. A piece cannot be both Flat and Weird at the same time. A piece is Upright when it's pointing straight upward, with its base parallel to the table, either on it or above it. A piece is Flat when its lowest triangular side is parallel to the table, either on it or above it. A piece is Weird if it's neither Upright nor Flat. Also, note that a group of pieces has the same orientation as long as they're all upright, all flat, or all weird, even if they're not all pointing in the same direction.

Grounded/Ungrounded: A piece is "grounded" if any part of it is touching the playing surface; otherwise it's "ungrounded." Note that this is entirely independent of a piece's orientation.

Direction: This term is slightly different from orientation. It refers to the direction that pieces are pointing relative to each other. Although absolute direction (i.e. north) is not allowed, multiple pieces may be said to be pointing in the "same direction," or "different directions," or even "opposite directions."

Pointing: Every piece has an imaginary "pointing ray" that shoots directly out of its tip and extends outward into space. This pointing ray will pass unhindered through any other piece. A piece is "pointing at" all of the pieces its pointing ray touches. If the ray hits the table, the ray will bend to skim along the surface of the table.

Touching: If a piece is in physical contact with another piece, it is said to be "touched." Unlike pointing, if one piece is touching another piece, the other piece is always touching it back.

Inserted: A piece is inserted if any part of it is anywhere inside another piece, regardless of orientation. It is considered to be "fully inserted" if its tip is touching the inside tip of another piece. A piece is "partially inserted" if it is inserted, but not fully inserted. Unless specified, "inserted" means either fully or partially inserted.

Stacked: When two or more Upright pieces are fully inserted, they are called a stack. All pieces in a stack are considered to be "stacked."

Top/Bottom: All stacks will have a top piece and a bottom piece. Stacks taller than two peices will have middle pieces, all of which can be considered above or below others in the stack.

Height: The physically highest point of a piece marks the height of that piece within the structure. A piece may be higher than, lower than, or at the same height as any other piece in the structure. There will always be at least one highest piece and at least one lowest piece in a structure. It's possible for the same piece to be both highest and lowest.

Exactly/At Least: Avoid using indefinite statements like "contains a red piece," or "contains two Smalls," because it's not clear whether you mean exactly that number, or at least that number. Always try to use definitive statements.

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ADVICE FOR PLAYERS

Because Zendo is an inductive logic game rather than a deductive one, there is no formula for thinking of possible secret rules. The rule options provided by the cards are vast, and if Moderators start creating rules of their own, the possibilities become truly endless. This is what makes Zendo both fun and challenging. So how should a player go about figuring out the one and only correct secret rule from possibilities too numerous to name? We have found that the most successful players are those who are able to constantly be seeking patterns on a global level while simultaneously creating very focused experiments on individual structures that help lead them in the right direction. In other words, they are constantly thinking of all the possible rules that could fit the structures on the table, while also thinking about how to create very specific new structures that will narrow down that list of possible rules.

FIVE SUGGESTIONS FOR CREATING STRUCTURES

Your goal when creating structures is to figure out what attributes matter for this particular rule. Interestingly, it is possible to determine with certainty that a particular attribute *does* matter, but there is no way to determine with certainty that a particular attribute *doesn't* matter. Therefore, you'll want to be careful not to develop false ideas about what doesn't matter simply because it hasn't mattered *yet*. But if you can determine that some particular attribute matters, it will help to focus the list of potential secret rules considerably. The best way to determine if some attribute matters is to build your new structures with calculated incremental differences from existing ones. Here are five suggestions for what kinds of incremental differences will be informative:

1. **Reduce:** Build your new structure so it's missing a certain piece, with all other pieces being exactly the same in every way. If the new structure is marked differently from the old, you know that the piece you removed was important in some way, be it color, shape, size, groundedness, relationship to other pieces, or something else (or maybe more than one of these!). If the marking token doesn't change color, continue to remove pieces from the structure one at a time until you find a piece that matters. Then begin thinking about how this piece might matter.

2. **Substitute:** If you believe a specific piece is important because of its color, build a similar structure in which that piece is a different color but everything else is the same. If the marking token changes, you have definitively proven that color matters in the secret rule. As is true for all of these suggestions, this technique can be used for many different attributes. Again, remember that you can't prove that color or any other attribute *doesn't* matter... only that it *does*. If you systematically substitute every single color and the marking token never changes color, this does not mean that color doesn't matter. Consider the rule, "A structure must contain three pieces of the same color." Now imagine a structure containing two pieces. No matter how you change the colors of the pieces, this structure will never change from a black marking token to a white one. Color does matter in this case, but this particular structure is never going to show us that it matters.

3. **Homogenize:** Sometimes information can be gained by homogenizing a particular attribute. For example, if there is a Yes structure on the table that has all three sizes in it, try making a new structure that keeps everything exactly the same except that all the pieces are the same size. If the marking token color stays the same, this suggests that size doesn't matter. Remember you can never know for sure that an attribute doesn't matter, but you can build evidence to support that conjecture.

4. **Single-Piece Structures:** No matter how many color options are available in the particular set of pyramids you are playing with, there will be a fairly small number of unique, single-piece structures that it is possible to build. Note that a single-piece cannot be in the weird orientation, nor can it be stacked on, pointing at, or touching another piece. Though you won't want to test every possible option, it is usually worthwhile to test a few, because if you find even one example in which the color of the marking token changes, you have vastly narrowed the field of possibilities for possible rules.

ADVICE FOR PLAYERS (CONT.)

5. Spreading: A good way to start teasing out whether a rule has any relational elements (such as touching, stacked on, or pointing at) versus only population elements (such as number, color, size, and orientation) is to spread out any structures that have pieces that are touching. This can be done several ways. If pieces are stacked in a tower, you can see what happens if you turn that tower on its side and remove the pieces from inside each other, while still having them touch. If the marking token doesn't change color, then it's possible that stacking doesn't matter. Next keep that same stack on its side and pull the pieces apart so they are no longer touching. If the marking token still doesn't change, then touching may not be involved. Finally, leave the separated pieces in place, but rotate them so they are not pointing at anything. If there is still no change in marking token, pointing may not be important to the rule. Another method of spreading is to leave each piece in its current orientation, but to spread all the pieces out on the table so that they are not touching or pointing at each other. Each of these methods is not perfect, as orientation, groundedness, and other factors are also being changed, but they can be helpful in thinking about relational elements.

FIVE TIPS FOR PONDERING PATTERNS

In addition to thinking about what structures you can create to give you the best information, you should also constantly be scanning the field of structures, looking for patterns. In the beginning when there are very few structures, it will be fairly easy to think of many rules that fit the current structures. But as the number of structures increases, your list of possible rules will dwindle to a more manageable level, and at some point you may find yourself with no remaining workable rules. Here are some tips for how to get unstuck if you find yourself without any idea what the rule could be:

1. Review the Attribute Definitions: There are many aspects to consider.

- Keep in mind that it's quite possible for more than one of these attributes to be involved in the secret rule. For example, if there are large pieces in both Yes and No structures, does that mean that size doesn't matter, or does it mean that there is another attribute that matters in conjunction with size, such as color or number or height?

- It can also be helpful to think about not only the attributes that a structure does have, but also those attributes that it does not have. For example, if all the Yes structures have a yellow piece, perhaps yellow is important to the rule; but it may be that the rule is actually about not having blue pieces. To be good at guessing Zendo rules, you need to consider both rules that include and rules that exclude.

- Keep in mind that the attribute definitions list is not at all exhaustive. If all else fails, try thinking about other possible attributes that may be coming into play. For example, when laid flat, the pyramids make a triangular footprint, whereas their footprints are a rectangular when they are upright. Or maybe there's a requirement for air to be able to flow freely into the inside of the pieces ("breathing"). These and other even zanier attributes have been used in Zendo rules.

- And finally, remember that even when you think you only changed one factor in your structure experiments, you almost undoubtedly affected many factors. For example, if you change a single upright blue piece into an upright red piece, you have: increased the number of red pieces, decreased the number of blue pieces, changed the number of red pieces in relation to blue pieces and vice versa as well as the number of red pieces in relation to yellow pieces and blue pieces in relation to yellow pieces, changed the number of upright red pieces, upright blue pieces, grounded red pieces, grounded blue pieces, the number of red and blue pieces that are pointing at nothing, etc. Try as you might, you'll never manage to only change a single factor at a time. The best you can do, therefore, is simply be aware of all the different factors that your experiments are changing so that you don't draw unjustified conclusions from the results.

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ADVICE FOR PLAYERS (CONT.)

2. Consider the Various Types of Rules: Rules can be either specific (i.e. must contain three red pieces) or general (i.e. must contain three pieces that are all the same color). They can be simple (i.e. must contain exactly one Small), relational (i.e. must contain at least two pieces that touch each other), or make use of multiple attributes (i.e. must contain at least one upright yellow Large). More complicated rules can involve "and phrases" (i.e. must contain a red piece and an upside-down piece), "and/or phrases" (i.e. must contain either a red piece or a lying-down piece or both), or number relationships (i.e. must contain more upright pieces than Larges). Particularly complicated rules might contain "both-or-neither phrases" (i.e. must either contain both a red piece and a lying-down piece or neither of these pieces).

3. Look for Partial Patterns: If you can't find an overall pattern that leads to a viable possible rule, try looking for partial patterns. For example, perhaps you have noticed that all the white structures on the table have exactly two pieces. You think this may be important, but the problem is that several of the black structures also have exactly two pieces. Now your job is to figure out the pattern among just the black pieces that have exactly two pieces. Do they all also have yellow pieces? Perhaps the rule is, "The structure must contain exactly two pieces and no yellow pieces."

4. Try to Break Your Own Rule: Once you have narrowed the field to just a few viable possible rules, don't create structures that confirm those potential rules. Your job now is to try to create structures that falsify your ideas... that break your potential rules. Create structures whose outcomes are difficult to predict. If these difficult structures do not succeed in breaking your potential rule, it's probably time to make a guess.

5. Make a Bad Guess: If you feel like the rule is on the tip of your tongue but you just can't quite pull all the pieces together, try taking a complicated and inelegant guess just to see how the Moderator will refute it. Anything that describes all of the Yes structures and none of the Nos will do. For example, you may guess, "The structure must contain a blue Large or a yellow Medium or exactly one ungrounded piece." Most likely, that isn't the rule. But if it fits everything on the table, then you may gain valuable information from the structure the Moderator creates to disprove your rule. However, other players will be getting the same valuable information, so only use this tactic if it's late in the game and you have plenty of guessing tokens to follow up with!

FIVE MORE TIDBITS OF PLAYER ADVICE

1. Pay attention to the two initial structures. Consciously or unconsciously, the Moderator will almost always give clues to the rule in their choices for the first two structures.

2. Use "Quiz" sparingly so as not to give too many guessing tokens to other players, and so as not to give any clues about what you are thinking. Try to use "Quiz" only when you have a guess in mind for which you need a stone, or when you think you can create a structure that other players will mark incorrectly and you alone will mark correctly.

3. When "Quiz" is called, use all the knowledge you have gained to date, and any intuitive hunches you have, to make an educated guess. But if you really have no idea what to guess, go with the odds. If most of the structures on the table are marked No, it's likely that the structure in question will also be marked No, and vice versa.

4. Don't guess too early or too often. Every guess you make has the potential of helping your opponents think of something they hadn't thought of before, so only guess if you fear someone else may win before your next turn, or if you have narrowed your list of potential rules down to fewer rules than the number of guessing tokens you possess.

5. Though incremental changes are most likely to give you useful information, if you are really stymied, try shaking things up by creating a structure that is totally different than anything else on the table. These structures can sometimes create that "ah-ha" moment!

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ADVICE FOR MODERATORS

When you're the Moderator, it's important for you to remember that you're not really a player. You are a facilitator. You're not in competition with the players. Instead, your main objective is simply to provide an enjoyable playing experience for everyone. There are many things you can do to ensure that the game is fun for everyone.

CHOOSE A RULE OF APPROPRIATE DIFFICULTY

One of the most important choices that you must make when you are the Moderator occurs before the game even starts—the choice of what rule to use. The most common mistake that beginning Moderators make is to choose rules that are too difficult for the current group of players. Remember, your goal as Moderator is not to stump the players with a really tough rule—it's to provide them with an enjoyable experience. Also remember that what counts as "too difficult" depends not only on the experience level of your current group of players, but also on what they're currently in the mood for. Don't be afraid to discuss rule difficulty with them before you choose a rule. Ask them what kind of rule they feel like playing; if they're in the mood for a tough one, they'll tell you. On the other hand, they may not want to know what difficulty you're choosing. They'll tell you that, too.

BE CAREFUL WHEN GOING OFF-CARD

At some point, you may wish to try inventing your own secret rule when you are the Moderator. We highly recommend that you first try playing with rule cards of all three levels of difficulty so that you will have a good sense of how difficult rules can be for the current players. Then, start with a rule that seems extremely simple, and work your way up slowly until you find a level that everyone's comfortable with. Even experienced players will have a hard time estimating the difficulty level of a rule they've never tried before. The best rule-of-thumb is to remember that rules are usually more difficult than they sound. If you are trying to decide between a few different versions of a rule, go with the one that seems the simplest. It's much better to choose a rule that's too easy than one that's too difficult. An easy rule will still be fun, and the game will probably be over quickly, at which point you're ready to simply start another. In contrast, a rule that's too difficult will generate a long and frustrating game—a punishing experience for both Moderator and player. We also suggest writing down your new rules. Nothing helps you clarify your thinking like committing the words to paper. Also, writing it down helps you avoid problems caused by forgetting or mis-remembering some detail about the rule in the middle of the game. Moderators seeking inspiration for new rules will find lists of ideas on the Internet.

AVOID AMBIGUITIES

Every rule must always provide an answer for any structure that a player could possibly build. That's why we use this standard structure: "The structure must contain X." Using this standard structure goes a long way toward avoiding ambiguity. Sometimes ambiguity will still sneak in through a misunderstanding about the definition of a term. For this reason we recommend using common terminology and their definitions as much as possible. See page 5 for our definitions of standard terminology.

EASE NEW PLAYERS INTO COMPLEX CONCEPTS

When teaching new players to play Zendo, it's best not to overwhelm them with the full list of terminology. Simply begin playing, selecting rules that only utilize the simplest features like color and shape. After you play a few games, you can begin talking about some of the basic terms, since the players will then be prepared to digest them. In fact, after a few games, new players will begin asking about things like "pointing" and "ungrounded" without being prompted. The best time to discuss terminology is when this discussion arises naturally in the course of play.

ADVICE FOR MODERATORS (CONT.)

CREATE SIMPLE INITIAL STRUCTURES

When you first play as Moderator, you may have the impulse to build large, complex initial structures, so that you will not "give too much away" before the game even starts. As you gain more experience playing Zendo, you will see that this is not necessary. It is impossible to give away any rule with only two structures, no matter how you choose to build them. Remember that your rule seems obvious to you because you already know what it is. The players will need many more than two examples of structures in order to see the patterns that seem obvious to you. Building large initial structures only serves to make the beginning of the game tedious, as the players reduce the sizes of those initial structures to manageable levels. We recommend keeping initial structures down to no more than four pieces each, and preferably fewer.

ALWAYS WATCH FOR MARKING MISTAKES

As the Moderator, your most important responsibility during the main portion of the game is simply to mark structures correctly. It's nearly impossible for players to mentally backtrack and undo the damage caused by faulty information. The best thing you can do to avoid this is to be careful. Don't move too fast. Think about every new structure the players make, and be sure you're marking it correctly. Also, use the "down time" while players are thinking to scan the table for possible mistakes.

ANSWER QUESTIONS TRUTHFULLY

Players may always ask the Moderator clarifying questions about the physical features of existing structures, such as, "Is this piece pointing at that piece?" or, "Which pieces are touching that yellow piece?" These questions are free and may be asked at any time. The Moderator must always answer them, even if they have no bearing on the actual rule. Players may even ask about a structure before they are done building it, such as, "Is this new structure just like this old one, except that the red piece is now blue?" In all matters of uncertainty, the Moderator's judgments are final. The players should be responsible for noticing borderline cases, and asking about them if they feel that they may be important. However, remember that you are only obligated to answer questions about the physical features of a structure. You should not answer any questions about why a structure does or does not follow the rule.

UNINTENTIONAL HINTS

There are five main scenarios in which Moderators sometimes give hints without meaning to. Here's how to avoid giving hints that could spoil the players' fun.

1. Wait for the player to call "Tell" or "Quiz" before grabbing a marking token. If you grab a marking token before a player has the chance to call "Quiz," you basically force the player to call "Tell" (since everyone has now seen the answer). Therefore, train yourself to listen for "Tell" or "Quiz" before you ever reach for the tokens.

2. Look at all the aspects of a structure before marking it or answering questions about it, whether those aspects apply to your rule or not. It's possible to "give away" certain facts about your rule by the way you study structures. For instance, if your rule has something to do with "touching," the players may be able to glean this fact simply by watching you study the new structures they create. Therefore, study all structures as if all of its features matter, no matter what your rule is. For example, if there's a piece on the far side of a structure, and you can't tell whether it's touching some other piece or not, stand up and take a look, regardless of whether your rule has anything to do with touching. If you make this your standard practice, people will not be able to glean anything in particular about your rule from your behavior. Of course, if this kind of behavior becomes too elaborate, it begins to seem like misdirection, which should not be your goal as Moderator. Your goal should not be to consciously misdirect the players. It should simply be to allow them to figure out the rule for themselves, without any overt clues from you.

ADVICE FOR MODERATORS (CONT.)

3. Don't give any indication as to whether it was easy or hard to decide how to mark a structure. When you're deciding how to mark a structure, you may have to make a silent judgment call about whether one piece should be considered to be touching another piece, or pointing at another piece, and so on. Be careful not to indicate to the players that you're agonizing over a tough judgment call. They will most certainly be able to glean important facts about your rule if you do. Try not to even indicate that a judgment call has been made.

4. Clarify a player's guess until all terms are defined and all ambiguities are resolved before creating your counter-example. You should understand the player's guess so well that you'd be able to moderate a game of Zendo using that rule. Do not hesitate to ask the player clarifying questions if there's anything you don't understand. Ask the player to define any terms that haven't already been agreed upon as standard terminology. Look for and point out any ambiguity in the wording of the guess, and ask the player to clarify. In fact, it's in everyone's best interest to fully understand a guess. The other players are perfectly free to ask clarifying questions along with the Moderator.

5. Provide everyone with equally helpful or tight-lipped counter-examples. One of the things to keep in mind when you set up a counter-example is that you have a fair amount of control over how much information your new structure provides. This is an area in which your responsibilities as Moderator are very open to personal interpretation and style. On one extreme, you may choose to set up helpful counter-examples that lead the players away from error and toward the correct answer. On the other extreme, you may take the tight-lipped approach, building counter-examples which give away as little as possible, and perhaps even reinforce erroneous theories that they've developed.

For instance, let's say that a player guesses, "The structure must contain a red piece pointing at a blue piece," when in fact your rule has nothing to do with red pieces, blue pieces, or pointing.

You could choose to build a very helpful counter-example, by (say) setting up a Yes structure consisting of a single yellow piece, which will strongly indicate to the player that the rule has nothing to do with any of those things. Alternatively, you can take the tight-lipped approach, and build a complex No structure containing many pieces, including a red piece pointing at a blue piece. This doesn't tell the players much at all, and may leave many of their erroneous theories about color and pointing intact.

You are under no obligation to be helpful or tight-lipped as a Moderator—this is a matter of personal style. The only official requirement is that you set up a new structure that definitively disproves the player's guess. However, it is important that you be consistent. Over the course of a single game, choose a style and stick with it. Being helpful gives a slight advantage to the player who's guessing, because that player has the first chance to guess again using the new information. This is perfectly fair, as long as you're consistently helpful after all guesses. But if you're helpful sometimes, and tight-lipped at other times, you'll be providing an unfair advantage to the players who are lucky enough to get the helpful counter-examples. Of course, even when you've chosen to be tight-lipped, a particularly incisive guess may force you to build a very helpful counter-example. In that case, the guessing player deserves the resulting advantage.

WHEN IT GOES ON TOO LONG

Sometimes, a secret rule can just be too difficult to unravel without help. Here's some advice for this situation.

Team-Style: In some cases, as players struggle with a challenging rule, they'll gradually begin working together, until the game becomes a kind of group effort, with players giving each other suggestions and telling each other their theories. They may even begin asking the Moderator for hints. In such a case, the Moderator may decide that a hint is in order, particularly if the players are openly sharing ideas about the solution.

CONT. →

ZENDO (CONT.)

ADVICE FOR MODERATORS (CONT.)

Guidance Mode: If the players are floundering, the Moderator can decide to draw things to a close, by switching into Guidance Mode. At this point, they will take over the creation of all structures. The Moderator begins by making a structure that gives a small hint and marking it. After allowing a bit of time for players to consider the structure, the Moderator will create another structure, which provides a slightly bigger hint. The Moderator will continue to create and mark structures, each progressively more obvious than the last, until someone gets it. Guessing tokens are no longer required, players are allowed to call out possible rules at any time. The first person to call out the correct rule wins. Deciding when to switch to Guidance Mode is entirely up to the Moderator.

Surrender: When a rule is exceedingly difficult, one or more players may simply want to give up. That's OK. If someone chooses to drop out of the game, for whatever reason, the other players can simply continue playing. The Moderator may regard this as an indication that it's time to switch to Guidance Mode, but they should also be sensitive to the remaining players' desires. They might still be engaged and determined to figure out the rule themselves. On the other hand, if all players decide to surrender, the Moderator will reveal the rule (and remember to choose an easier one next time).

WHEN MISTAKES HAPPEN

Sometimes a Moderator will make a mistake that compromises the entire game. Being Moderator is a skill, not a science, and even the most experienced Moderator can make mistakes. When an error is discovered, any player may immediately demand that the game be terminated and a new game begun. If all players agree to continue, the Moderator should correct the mistake in the appropriate manner.

Mismarked Structure: The Moderator might incorrectly mark a structure and fail to fix it before a player has taken another action. If this happens, the Moderator should fix the mistake as soon as it's noticed.

Misunderstood Guess: The Moderator might misunderstand a player's guess and make a structure that does not disprove it. If this happens, the new structure must remain on the table and the Moderator must make another structure after the ambiguity is resolved.

Error in Disproving Structure: A similar mistake occurs when the Moderator sets up a structure that's (say) Yes according the player's guess, and then they realize that it's actually Yes according to the secret rule, too. Oops! As in the Misunderstood Guess, if this happens, the new structure must remain on the table and the Moderator must make another structure that actually disproves the guess.

Disproving Structure on the Table: The Moderator might miss the fact that one of the structures on the table disproves the player's guess and create another structure to disprove it. In this case, the guess stands, the new structure remains, and the player does not get their token back.

Declaring a Winner Incorrectly: There are many different ways to word any rule, and sometimes it's difficult for the Moderator to sort out whether or not a player's guess is identical to the secret rule. The Moderator will never accidentally declare a player's guess to be incorrect when it is in fact correct, because the only way to declare a guess incorrect is to provide a counter-example. However, it is possible to accidentally declare a guess correct, when in fact it's actually incorrect. When this happens, someone usually notices after the fact that the two rules are actually different, and a counter-example could have been constructed. Obviously, it's impossible to recover from such a mistake, since at that point everyone will have learned the secret rule. It probably won't have really mattered; given that the two rules were so similar, the game was probably about to end anyway. Nevertheless, the Moderator should be on their guard against this common mistake, as it does more or less invalidate the game, even when it's obvious who "would have won."