

Zendo

From: <http://www.koryheath.com/games/zendo/>

By Kory Heath

Zendo is a game of inductive logic: the Master creates a rule and the first student to state the rule correctly wins. You'll need about 4 Treehouse sets (more is better) and a fair number of stones in black, white and a third color.

Setup

Choose someone to be the Master. The other players are the Students. Give each Student a black and a white stone, to serve as “answering stones”. The remaining black and white stones are “marking stones,” and the stones of the third color are “guessing stones”. Put all marking and guessing stones in front of the Master, and put all of the pyramids into a global stash within reach of all the Students.



Koans

Over the course of the game, players will create different arrangements of one or more pyramids on the table. Each arrangement is referred to as a “koan”, pronounced “KO-ahn”. Koans can be set up in any fashion, as long as they don’t touch other objects or other koans. They also exist in a space and time of their own finished state. Koans may not point at things outside of themselves, nor may rules refer to the order of placement of pieces.

Choosing a Rule

When you are selected to be the Master, your first task is to devise a secret rule that will be used during this game of Zendo. For your first several games, you may want to use one of the rules listed on the [Rules For Beginners](#) page. When the players are more experienced, you can invent your own rule.

According to your rule, some koans will “have the Buddha-nature”, and others will not. For the Students, the object of the game is to try to figure out what your secret rule is. As the Master, your job is to act as facilitator; you are not actually a player, and you are not in competition with any of the players. Some examples of rules are:

- **A Simple Rule:** A koan has the Buddha-nature if it contains one or more green pieces.
- **A Very Difficult Rule:** A koan has the Buddha-nature if it contains an odd number of pieces pointing at other pieces.
- **A “Negative” Rule:** A koan does *not* have the Buddha-nature if it contains exactly three pieces touching the table; otherwise it does.

As the Master, build two koans to start the game. One should have the Buddha-nature according to your rule; mark it with a white stone. The other should not; place a black stone next to it. You will mark all of the koans in this way throughout the game. Starting koans need not be complicated, even with experienced players.

Turn Order for Students

1. Build a Koan

- Create a new koan using one or more pyramids from the global stash.

2. Say “Master” or “Mondo”

- **Master:** The Master will immediately mark the new koan with a black or white stone.
- **Mondo:** All Students must guess if the new koan has the Buddha-nature or not. Pick up your own answering stones and hide your answer (black or white) in one fist. Hold that fist out over the playing field, and wait for all of the other Students to do the same. When everyone is ready, reveal your guess. The Master will mark the koan with the correct answer, and will award a guessing stone to each player who answered the Mondo correctly.

3. Guess the Rule (optional)

- Make a Guess:** If you have any guessing stones, you may choose to spend one or more of them to try to guess the Master’s rule. Give a guessing stone to the Master and then state your guess as clearly as you can.
- Clarify the Guess:** The Master will ask questions until any ambiguities, uncertainty or lack of understanding of your guess has been resolved. Your guess is official only when both you and the Master agree that it is official. Any time before that you may retract your guess and take back your stone or even change your guess. If any koan on the table contradicts your guess the Master should point this out and you may take back your stone or change your guess. It is the Master’s responsibility to make certain that a guess is unambiguous and not contradicted by an existing koan, but all Students are encouraged to participate in this process.

- c. **Master Disproves Guess:** After you and the Master agree upon an official guess, the Master will disprove it, if possible. The Master builds a koan which has the Buddha-nature but which your guess says does not, or builds a koan which does not have the Buddha-nature but which your guess says does.
- d. **Repeat:** Once the Master has built a counter-example and marked it appropriately, you may spend another guessing stone, if you have one, to take another guess. You may spend as many of your guessing stones as you wish during this portion of your turn. When you are finished, the action passes to the Student on your left.

Winning

If the Master is unable to disprove your official guess, you've achieved enlightenment—you've discovered the Master's secret rule and have won the game!

A Selection of Terminology edited from <http://www.koryheath.com/games/zendo/terminology/>

The following terms and definitions can make it easier for Masters and students to conceptualize and discuss Zendo rules. These definitions are merely conventions, and are not part of the official rules of Zendo.

Color/Size — A koan “contains a color/size” if it contains any pieces of that color/size. Rules may refer to the “number of colors/sizes” contained within a koan, or within a subset of its pieces. A koan always has a “largest size.” All pieces of that size are “the largest pieces in the koan.” A koan also always contains a smallest size, and those pieces are referred to as the smallest pieces in the koan. If a koan contains exactly one size, those pieces are both the largest and the smallest.

Pip Count — Each piece is marked with “pips” indicating its size. This represents a piece’s “value” or “pip-count.” A group of pieces has a pip-count equal to the sum of all of its pieces. When referencing “odd” and “even” don’t forget that zero is an even number!

Orientation — Each piece within a koan has one of three “orientations”: “**upright**”, “**flat**”, or “**weird**”. An upright piece points upward with its base parallel to the table. A flat piece has its lowest triangular side parallel to the table. A piece is “weird” if it’s neither upright nor flat. Orientation has nothing to do with whether or not that piece is touching the playing surface. A group of pieces may have the same “orientation” even if they’re not all pointing in the same direction.

Grounded and Ungrounded — A piece is “grounded” if any part of it is touching the playing surface; otherwise it’s “ungrounded”. Note that this attribute is entirely independent of a piece’s “orientation”.

Direction — This refers to the direction that pieces are pointing relative to each other. Absolute direction is not allowed, but multiple pieces may be pointing in the “same/different direction” or perhaps even “opposite directions”.

Pointing — A piece is “pointing at” all of the pieces its “pointing ray” touches. A piece may be referred to as “the first (or second) piece being pointed at.” A piece may “point through” one or more pieces at some other piece.

Touching — If one piece is touching another piece, the other piece is always touching it back.

Tower — A tower is any group of one or more pieces in which the tip of each piece is fully touching the underside of the tip of the piece above it. A tower may be upright, flat, or weird. Pieces are still “above” each other in a tower lying on its side. The pieces within a tower do not form sub-towers; every piece in a koan belongs to exactly one tower.

Height — The physically highest point of a piece marks the vertical position of that piece within the koan. A piece may be higher than, lower than, or at the same height as any other piece in the koan. There is always at least one highest piece and at least one lowest piece in a koan. It’s possible for the same pieces to be both the highest and the lowest in a koan.

Exactly/At Least — Avoid using indefinite statements like “contains a red piece”, or “contains two upright pieces” because it’s not clear whether you mean *exactly* that number, or *at least* that number. Always use definite statements like “contains exactly one red piece”, or “contains at least two upright pieces”.

Majority/Plurality — When there are more red pieces in a koan than any other color, the koan contains a “plurality” of red pieces. When there are more red pieces in a koan than all the other colors put together, the koan contains a “majority” of red pieces. If players use either of these terms while you are the Master, ask for clarification.

The Structure of a Rule

The easiest way to state any rule is to use one of the two following forms:

- A koan has the Buddha-nature if (and only if) X.
- A koan *does not* have the Buddha-nature if (and only if) X.

If a rule explicitly states that certain koans have the Buddha-nature, you may assume that the rest of the koans do not; if a rule explicitly states that certain koans do not have the Buddha-nature, you may assume that the rest of the koans do.