

## Ghostly Field (solution)

by Celestine Lau

This puzzle consists of several mini-puzzles, each of which yields several feeders to the minimeta.

### Capteh

Capteh is a game that involves keeping the capteh in the air using various parts of the body except the hands. Each of the clues here can be answered by a word or short phrase containing either “HEAD” or “FOOT”, with the given enumeration applying to the answer without “HEAD” or “FOOT”.

Four-sided shape with a large interior angle (5)	ARROWHEAD
The number of customers that visit a store over a period of time (7)	FOOT TRAFFIC
Nature trail (4)	FOOTPATH
Harley-Davidson engine produced up till 1985 (4)	IRONHEAD
Game with 11 players on each team, that may be different depending on who you ask (4)	FOOTBALL
Promontory (4)	HEADLAND
Annotation or comment (4)	FOOTNOTE
Good luck charm (6'1)	RABBIT'S FOOT

Leader with no power (6)	FIGUREHEAD
Type of cost incurred in the running of a business that's not attributable to individual items (4)	OVERHEAD
Important piece of news (4)	HEADLINE
Low mound at the base of a mountain (4)	FOOTHILL
One-cent coin minted in 1859 (6)	INDIAN HEAD
Total number of people employed by a company (5)	HEADCOUNT
Extremely and recklessly hasty (4)	HEADLONG
Video recording (3)	FOOTAGE

Subsequently, the first letter or *head* (ignoring the word HEAD itself) should be extracted from the HEAD clues, and the last letter or *foot* should be extracted from the FOOT clues

(ignoring the word FOOT). This gives ACHILLES and FOLLICLE. Each of these forms a common phrase with a relevant body part, **HEEL** and **HAIR**, which are the two sub-answers for this section.

### Country Erasers

The first step here is to observe that the dimensions of the flags are slightly different, and quite precise. The first flag has a 1:2 aspect ratio and the other two flags have a 2:3 ratio. Also, each flag has a black border around it (similar to an actual country eraser), but part of the black border is missing. Specifically, the first flag only has the right 2/7 remaining, the second flag has the left 1/7 and the right 2/7 remaining, and the 3rd flag has the left 2/7 and right 1/7 remaining.

Next, identify the possible countries the flags could represent.

1. The first flag is probably the best starting point, as among flags with aspect ratio 1:2, only Nigeria's is green on the right 2/7.
2. The second flag is blue on the left and red on the right. This could correspond to Andorra (although Andorra's aspect ratio is 7:10, so that would rule it out), Chad, France, or Romania.
3. The third flag is light blue on both sides. This could be Somalia, Guatemala (although Guatemala's aspect ratio is 5:8) or Micronesia (10:19).

The game of Country Erasers is played by attempting to flip one eraser on top of another. In this case, the flavortext suggests that the winning erasers are important, and that they are "very effective" – so effective that they *erased a country* from the losing eraser. Of the possible countries mentioned above, observe that NIGERIA, ROMANIA, and SOMALIA all contain the name of another country within their own name, namely NIGER, OMAN and MALI (in fact, these are the only 3 countries that do). Also, NIGERIA, ROMANIA, and SOMALIA are all 7 letters long, and if you consider the 1/7 portions of the flag as corresponding to each letter of the country, the parts that are removed correspond to the contained country's name. Hence **NIGER**, **OMAN** and **MALI** are the winning erasers and the 3 sub-answers to this section.

(Solvers may also have noticed that a typical country eraser has the name of the country on it, which is not present in this puzzle. This was intended as a hint that the names of countries are important here.)

### Hopscotch

In Hopscotch, a player would first throw an object onto a square, then hop to the end, skipping that square, turn around, and hop back to the beginning, retrieving their item along the way, but continuing to skip the square that the item was on (in some variants, the square that the item was on would still be stepped into, but the symmetrical set of footprints shown demonstrates that this variant is not in use).

The flavortext states that each square represents something, and "sequence" suggests that these things form a sequence. First, it is useful to attempt to determine which footprints are on which square. Some are guaranteed, for example, all games contain a pair of left/right footprints after the first 2 or 3 left footprints, which correspond to squares 4 and 5, then a sequence of 2 consecutive left/right footprints which correspond to landing on squares 7 and 8 and then turning around.

The below table summarizes the possible deductions for which footprints are on which squares. ?? represents the possibility of the missing square.

Square	Game 1		Game 2		Game 3	
	Left	Right	Left	Right	Left	Right
1	M or ??	Y or ??	J or ??	Y or ??	R	T
2	M or E or ??	Y or H or ??	J or F or ??	Y or Y or ??	O	X
3	E or ??	H or ??	F or ??	Y or ??	T	R
4	M	S	A	L	R	T
5	J	R	M	Y	D	N
6	S	N	J	E	??	??
7	U	S	J	Y	H	E
8	N	E	A	T	G	T

Solvers might now notice that there are a fair number of uncommon letters like J and X, and in particular a lot of Ys for the right foot in game 2. The “OX” in game 3 might also be clueful. As suggested earlier by “sequence”, each of these are well-known sequences, where the left and right footprints correspond to the leftmost and rightmost letters of each element of the sequence.

Game 1: Planets, with VENUS missing

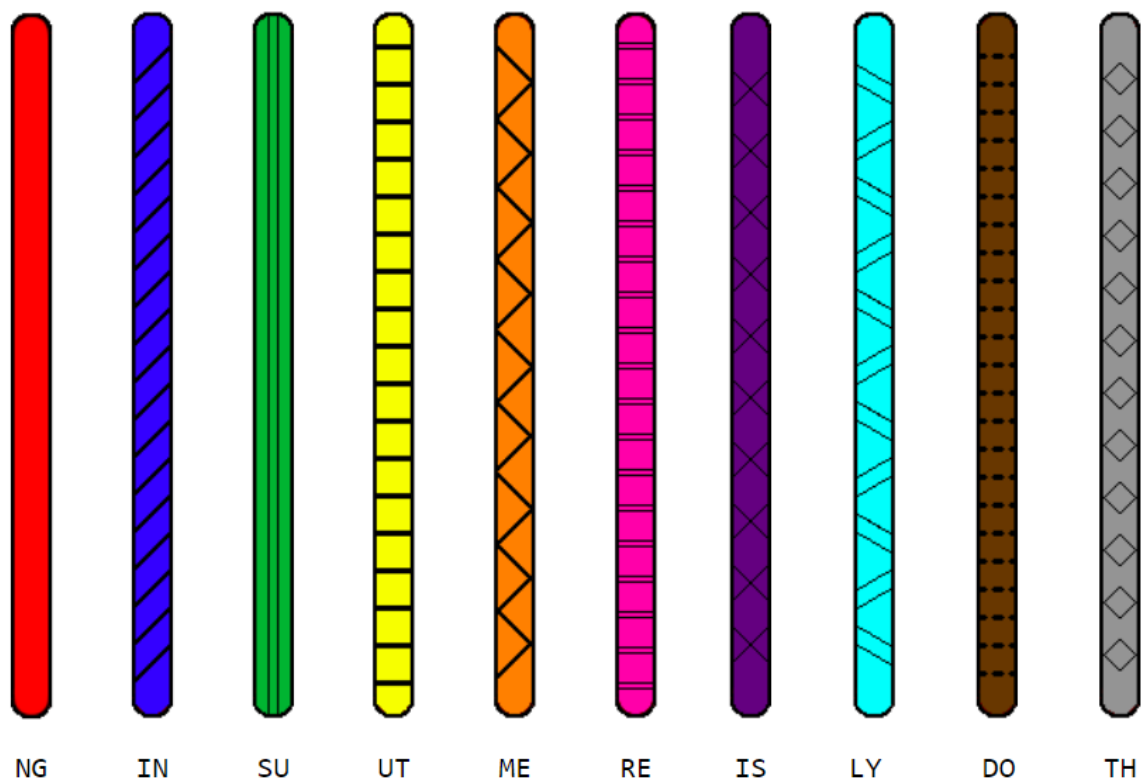
Game 2: Months, with MARCH missing

Game 3: Chinese zodiac signs, with SNAKE missing

Hence, the 3 answers from this section are the 3 missing items, **VENUS**, **MARCH** and **SNAKE**.

### Pick up Sticks

Each of the given clues has a 6 letter answer. Also note that each pick up sticks game has 18 sticks, suggesting that each answer corresponds to 3 sticks. Through solving some of the clues, solvers might notice that there are many letter pairs that form bigrams (or the reverse) across the 3 games, such as EM / ME. In fact there are only 10 such letter pairs, which corresponds to the 10 different types of sticks. In the game of pick up sticks, sticks can only be picked up if there are no other sticks on top of them, which could give a rough order of picking them up (with several possibilities). For example, in the 3rd board, the first stick that must be picked up is the orange one, and shortly after it is possible to pick up an orange stick as the 4th and 6th stick. In the first given game, the first 2 answers are METHOD and EMINEM, which if split into letter pairs, have M/E as the 1st, 4th and 6th letter pair. Hence, the orange stick corresponds to M/E. In this way, the other game/board matchings and colors can be deduced.



The answers, and the corresponding colors of sticks, are shown in the table below.

Game 1 (corresponding to board 3)				
1. Means	METHOD	orange	gray	brown
2. "8 Mile" rapper	EMINEM	orange	blue	orange
3. Female reproductive organ	UTERUS	yellow	pink	green
4. Step down	RESIGN	pink	purple	red
5. Only	MERELY	orange	pink	cyan
6. ???	<b>DOSING</b>	brown	purple	red
Game 2 (corresponding to board 1)				
1. Ra, e.g. (2 wds)	SUN GOD	green	red	brown
2. Adjusting precisely	TUNING	yellow	blue	red
3. Legal entity that sells securities	ISSUER	purple	green	pink
4. Individually	SINGLY	purple	red	cyan
5. Continue	RESUME	pink	green	orange
6. ???	<b>THINLY</b>	gray	blue	cyan
Game 3 (corresponding to board 2)				
1. Vocalist	SINGER	purple	red	pink

2. One type of alcohol	METHYL	orange	gray	cyan
3. Cover	INSURE	blue	green	pink
4. Game designer Knizia	REINER	pink	blue	pink
5. Certainly	SURELY	green	pink	cyan
6. ???	SUTURE	green	yellow	pink

Each game has 3 sticks left over after the first 5 words are formed. Using their colors and the constraints on the order that they must be picked up, they can only form the words **DOSING**, **THINLY**, and **SUTURE**, which are the 3 answers in this section.

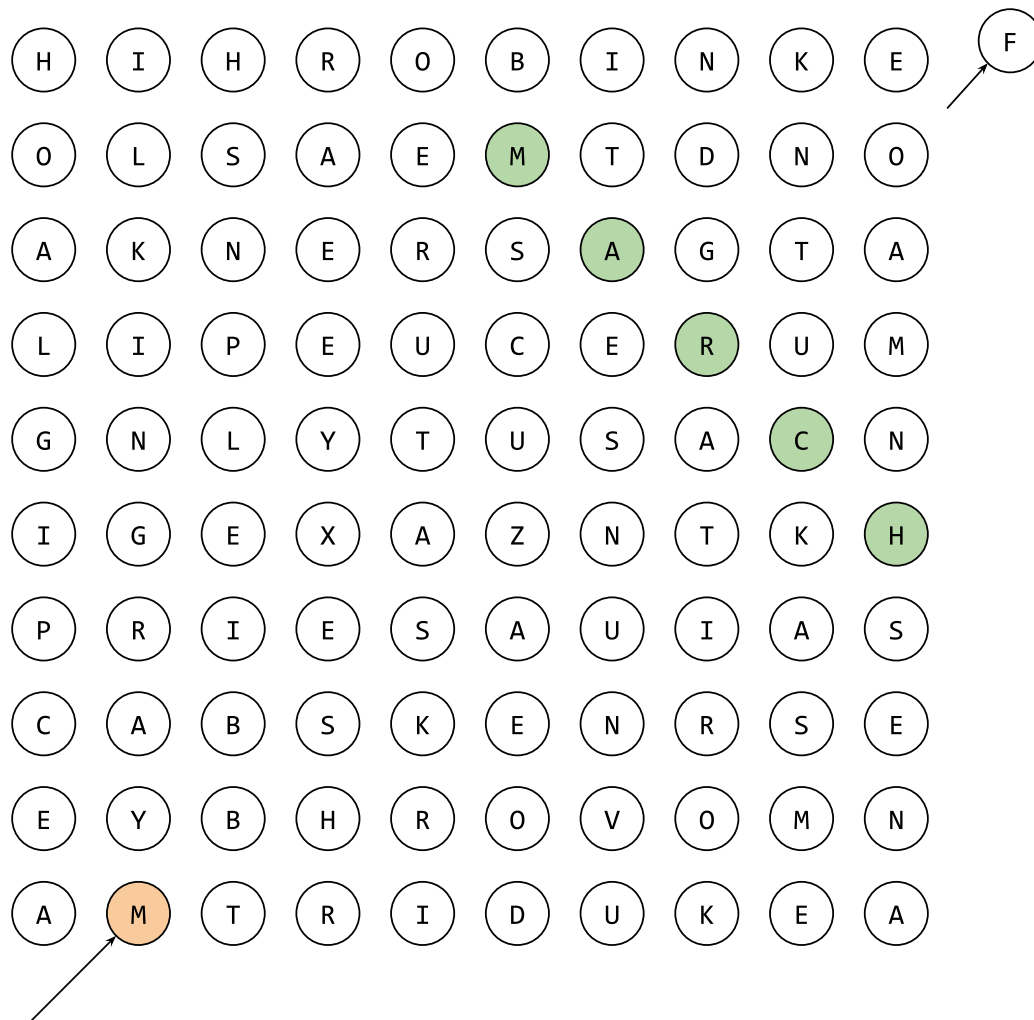
### Marbles (Mini-meta)

To recap, the 11 feeder answers are

HEEL  
HAIR  
NIGER  
OMAN  
MALI  
VENUS  
MARCH  
SNAKE  
DOSING  
THINLY  
SUTURE

In this mini-meta, solvers are presented with a grid and a pictorial representation of some rules. The rules suggest that for an answer like "SAMPLE", a marble with the letter S should be rolled, and when that letter strikes a row of marbles, would cause each marble to be "displaced" by one space. The grid itself has certain things of note. First, the spacing between marbles is about the radius of 1 marble, meaning that marbles can be rolled at a 45 degree angle and can affect a diagonal, but not at a 63.43 degree angle (as a 1:2 ratio would require). Second, some of the words in the grid are close to the meta answers, for example there is "MATCH" and "TURE" with an "SU" nearby. In fact, for "MATCH", there is an R diagonally to the bottom left of the T, hence it would be possible to form "MARCH" by rolling a marble up and to the right to displace the entire diagonal. That is the only feeder that can be formed by rolling a single marble, so it makes sense as the first move.

## Step 1



Note that the marble that is rolled should contain M as it is the first letter of MARCH. Continuing in this way, at each step, there is exactly one remaining feeder that can be formed by rolling a marble.

The below table describes how each answer is formed by rolling a marble. Coordinates are given in (row, col) order, so (10, 2) refers to the marble on the 10th row and 2nd column.

Feeder	How to roll	Where the answer is formed	Marble that rolls out
<b>MARCH</b>	↗ hitting (10, 2)	↘ from (2, 6)	F
<b>SUTURE</b>	↙ hitting (1, 10)	↑ from (7, 5)	A
<b>OMAN</b>	↓ hitting (1, 8)	↘ from (1, 5)	K
<b>HAIR</b>	← hitting (9, 10)	↙ from (6, 10)	E
<b>DOSING</b>	↓ hitting (1, 2)	↖ from (10, 6)	M
<b>NIGER</b>	↘ hitting (6, 1)	↘ from (6, 1) using the N from this marble itself	I
<b>SNAKE</b>	→ hitting (5, 1)	↙ from (5, 8)	N

HEEL	↘ hitting (1, 3)	↓ from (2, 4)	E
MALI	↑ hitting (10, 4)	↙ from (2, 6)	R
THINLY	↘ hitting (1, 1)	↘ hitting (1, 1) using the T from this marble itself	A
VENUS	↖ hitting (10, 7)	→ from (8, 5)	L

At each stage, a marble is ejected from the grid. Taking these marbles in order gives the answer **FAKE MINERAL**. After all, these marbles aren't quite like the mineral marble.

#### Constructor's Notes:

The theme of this puzzle was inspired by Squid Game, and I wanted to make a version that referenced Singapore childhood games. Given the meta answer, I decided not to make the puzzle actually reference Squid Game (to be honest, I found Squid Game itself somewhat overrated, but that's a completely separate discussion topic), but decided that the mini-meta should be "Marbles" in order to somewhat tie in with the answer. The game of Marbles has many variations, as demonstrated by the show, but the kind more commonly played in Singapore involves rolling marbles to hit other marbles. I experimented with various ideas (such as attempting to model the motion of marbles using the concepts of momentum and friction) and eventually settled on this format of a "displacement" word search.

As for the sub-puzzles, it is a bit of a pity that I had to repeat the first/last letter mechanic in two separate sub-puzzles, but I felt that it adequately reflected the concepts in those puzzles (head / foot), (left / right feet). One sub-puzzle candidate that I mulled over for a long time but couldn't come up with anything good was *Five Stones*, let me know if you have any good ideas for it (or write a puzzle and I'll be happy to test it!).