

# FIELD CUT

A confrontational game  
by Zach London

## RULEBOOK



12+



2 Players



20m



# OVERVIEW

The goal is to determine the exact orientation of blue, pink, and green wedges on your opponent's Hidden Color card.

Take turns rolling two dice.

The first die controls Humphrey's movements around the Game Board, which is based on the anatomy of the visual system.

When Humphrey lands on an anatomic structure, his visual fields are temporarily impaired, as if he had a lesion in that part of the brain or eye.

The second die determines what color Humphrey is trying to see in the parts of his vision that are spared.

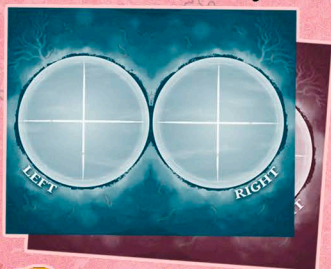
Use that information to hone in on correct orientation of your opponent's colors.

To win, find all three before your opponent!

## CONTENTS:

- Game Board
- Play mats (2)
- Hidden Color Cards (12)
- Shield Cards (2)
- Rulebook
- Dice (2)
- Card stands (2)
- Humphrey the Lesionator
- Colored cubes (16 blue, 16 pink, 16 green)

Play mats



Hidden Color Cards



Humphrey  
the Lesionator

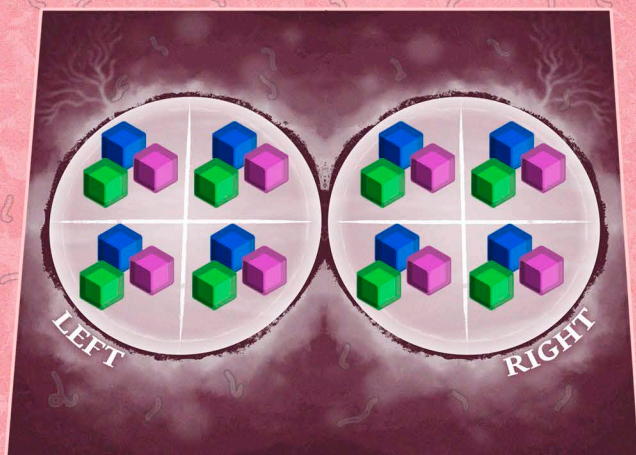


Shield Cards

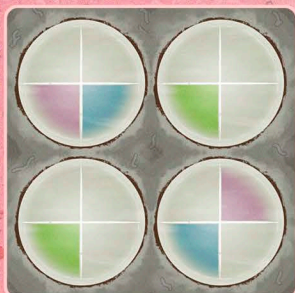


## SETUP:

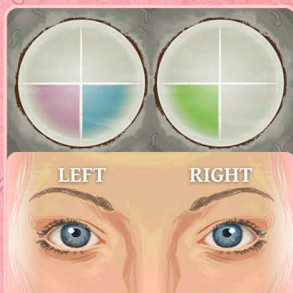
- Players sit next to each other or at a 90-degree angle from one another, with the Game Board placed between them.
- Place Humphrey the Lesionator (henceforth, "Humphrey") in the starting point in the middle of Optic Chiasm, which is designated by a star.
- Each player puts a Play Mat in front of them and places three cubes – one of each color (pink, green, and blue) – inside each of the eight quadrants of their Play Mat.



- Shuffle the Hidden Color Cards. Each player takes one and places it in their card stand facing them, so their opponent cannot see it.
- Each player takes one Shield Card and places it in their Card Stand so it covers the bottom half of the Hidden Color Card.



Choose  
Orientation





## Choose a starting player:

Players roll two dice.

Whoever has the higher roll goes first.

## GAME PLAY:

Players alternate turns.

A turn consists of the following three actions in order:

1. Roll both dice.
2. Move.
3. Query.

### ROLL BOTH DICE

- If a player does not roll doubles (two of the same die roll), they will use the value of one die roll to MOVE and the other die roll to QUERY. The player gets to choose which die roll they will use for each.
- If a player rolls doubles (two of the same die roll) they may choose to either
  - Play normally. (Move and Query), OR
  - Move only, forego querying, and take another turn.

### MOVE

- Move Humphrey the number of spaces equal to the value of one die roll. He may move between spaces that are touching or connected by neurons (white lines.) Note that Humphrey can travel between the left and right Superior Branch Retinal Artery and between the left and right Occipital Cortex, even though these are on opposite sides of the head.
- Humphrey cannot change his direction of movement (i.e. double back) on a single move.

### QUERY (Based on the other die roll)

- Ask the opponent if a specific color is visible to Humphrey based on the value of the other die roll.
- Match the die roll to a color:
  - 1-2 for Blue
  - 3-4 for Pink
  - 5-6 for Green

For example, a player who rolls a 4 could ask, "Can Humphrey see pink?"



- Then, the opponent answers, based on Humphrey's location and the quadrant where the matching color is found on their Hidden Color Card. Humphrey is considered to have the visual field cut that a patient would have if there was a lesion in the location on which he is standing. Each game space is connected to a color-coded image with darkened quadrants indicating the areas that he cannot see.



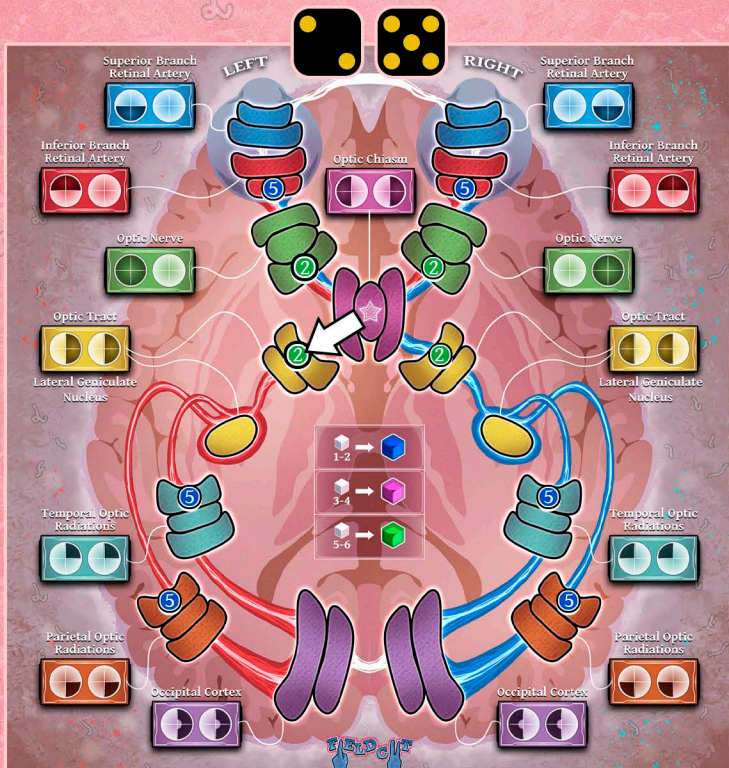
So, the opponent answers “yes” or “no,” based on whether the quadrant is light or darkened.

- Using the information they learned, the player whose turn it is may then remove colored cubes from their play mat and return them to the box, showing that they know, by process of elimination, that a certain color is not present in a certain quadrant.

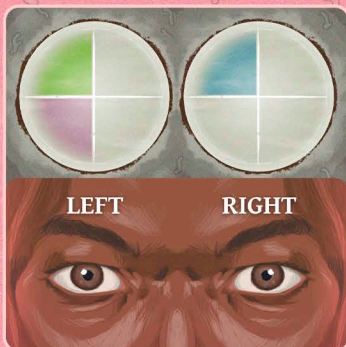


## SAMPLE FIRST TURN

- Leah, the first player, rolls a 2 and a 5. She can choose to move 2 spaces in any direction and query about green or move 5 spaces in any direction and query about blue (see the color-matching chart under “Query” on page 3 and on the Game Board).
- She chooses to move Humphrey two spaces into the left optic tract. She asks, “Can Humphrey see green?”

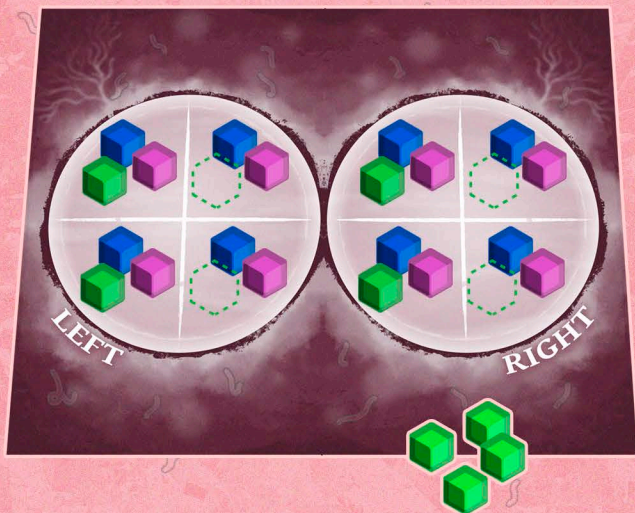






Alex's Hidden Color Card

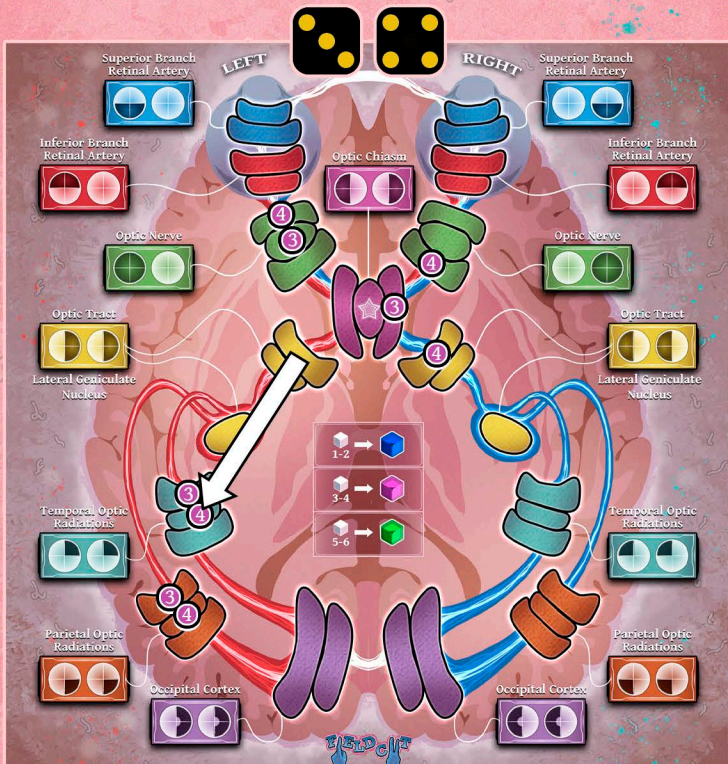
- Alex, the second player, consults his Hidden Color Card. The green wedge is in the top left corner of the left eye. Because this area would be visible to Humphrey if he had a lesion in this Optic Tract, he says, "Yes Humphrey can see green."
- Leah now knows that the green cube cannot be in these four quadrants (top right and bottom right of each eye) so she removes the green cubes from those parts of her play mat and returns them to the box.





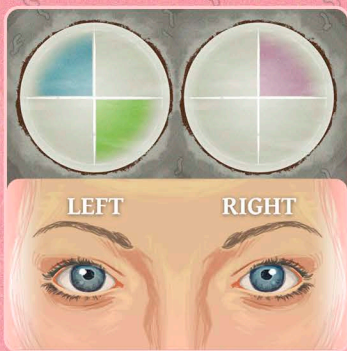
## SAMPLE SECOND TURN

- It is now Alex's turn. He rolls a 3 and a 4.
- He will have to query about pink no matter what, but he can choose to move 3 or 4 spaces.



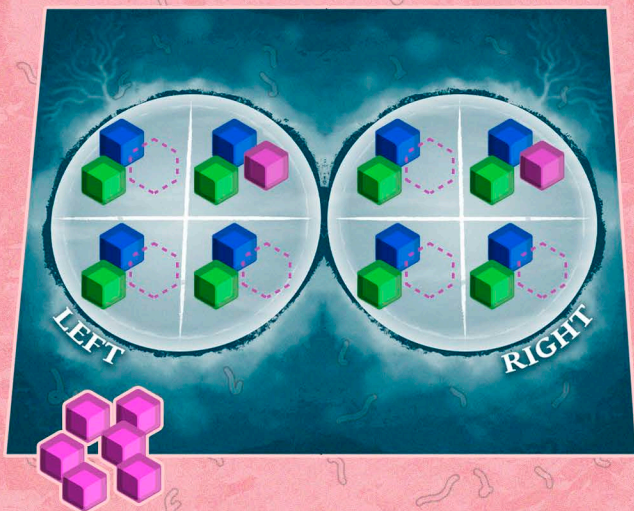
- He chooses to move four spaces to the left Temporal Optic Radiations and query if Humphrey can see pink.





Leah's Hidden Color Card

- Leah consults her Hidden Color Card. The pink wedge is in the top right of the right eye. This is in one of the two quadrants that Humphrey cannot see.  
“No, Humphrey does not see pink,” she says.
- Alex now gets to remove all but two of his pink cubes, the two in the top right corner of each eye. It was a lucky guess!





## WINNING

- Play continues until one player has successfully determined where each colored wedge is located on their opponent's Hidden Color Card.
- First, confirm that all cubes except one of each color have been removed from your Play Mat.
- Then, ask your opponent to reveal their Hidden Color Card to verify whether your guesses are correct.

## EXPERT VERSION

Ready for a bigger challenge? Take unused Hidden Color Cards and place them face down on the board so they cover up the images of the visual field deficits associated with each localization.

Now, when Humphrey lands on a space, you and your opponent will need to really know your stuff to play!

## NOTES

- If your opponent makes a mistake and removes the wrong cubes from their Play Mat, tell them right away so they can correct the error. Do not try to trick them.
- The occipital cortex causes a field cut with macular sparing, which means there is a small area in the center of the field that is still visible. This pattern is shown on the Game Board for educational purposes, but does not impact the game. The fields that are mostly dark should be considered dark. For example, if Humphrey is on the right occipital cortex, he does not see any colors in the left fields in either eye.
- For the sake of gameplay, we have simplified the neuroanatomy of visual field cuts. In reality, lesions in the temporal and parietal optic radiations may cause asymmetric vision loss, while vision loss affecting a single quadrant in both eyes usually localizes to part of the occipital lobe.



# CREDITS

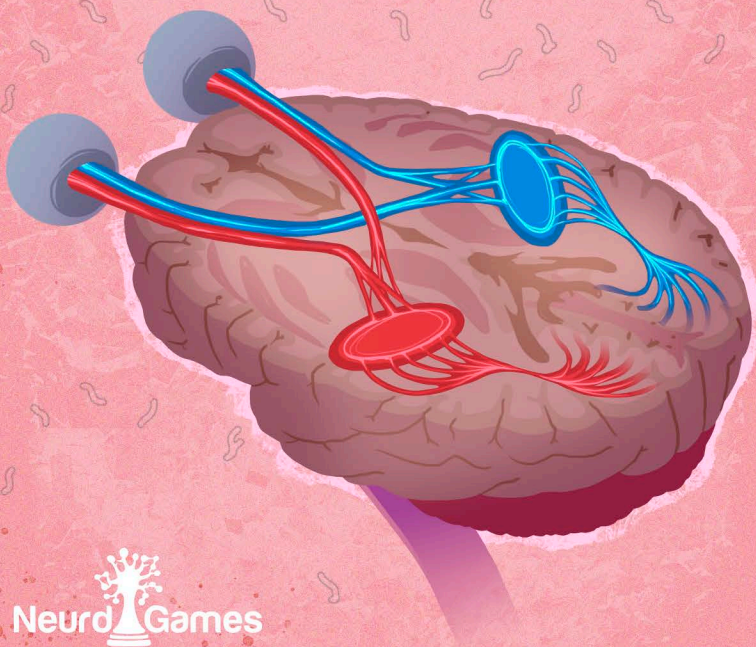
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*Special Thanks*  
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*This game was funded, in part, by the Jerry Isler Neuromuscular Fund  
and the James W. Albers Collegiate Professorship of Neurology.*







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