See A Hole in Your Hand

Materials: 8 1/2 x 11 sheet of paper

Directions:

1. Roll the paper lengthwise into a tube about a 1/2 to 3/4 inch in diameter.
2. Put the tube in your right hand and hold it up to your right eye. Look through the tube with both eyes open. You should be able to see the inside of the tube as well as what is around it.
3. Place your left hand about 2-3 inches or 5 cm in front of your left eye, palm outwards and thumb extended. Rest the tube between the extended thumb and the forefinger of your left hand. For at least 10 seconds, try to focus on the sight in the distance through the tube, not your hand. Notice that your hand appears to have a hole in it.
4. Switch your hands and eyes holding the tube in your left hand up to your left eye. Do you notice any difference between the hands?
5. With the tube and hand in place you can move your arm so the hole travels up and down it.

5. Try to explain what is happening to cause this optical illusion.

   Create a hypothesis to explain why this is happening.

   Answer is below in upside down box.

Explanation:
One of your eyes sees a hole, while the other sees your hand. Your eyes and brain put the two together creating a hand with a hole in it. This process is called binocular rivalry. See video showing and explaining the process. https://www.ifiscience.com/brain/check-out-optical-illusion-which-gives-you-hole-your-hand/ 3:17 min.

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